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NEWS 3 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 4 JUL 02 CHEMCATS accession numbers revised  
NEWS 5 JUL 02 CA/CAplus enhanced with utility model patents from China  
NEWS 6 JUL 16 CAplus enhanced with French and German abstracts  
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NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 19 SEP 13 FORIS renamed to SOFIS  
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 21 SEP 17 CA/CAplus enhanced with printed CA page images from 1967-1998  
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CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),  
AND CURRENT DISCOVER FILE IS DATED 19 SEPTEMBER 2007.

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L1 STRUCTURE uploaded

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## L1 STR

Structure attributes must be viewed using SIR Express query preparation.

=> S 11  
SAMPLE SEARCH INITIATED 15:31:54 FILE 'CASREACT'  
SCREENING COMPLETE - 4253 REACTIONS TO VERIFY FROM 319 DOCUMENTS  
  
100.0% DONE 4253 VERIFIED 50 HIT RXNS 4 DOC  
SEARCH TIME: 00.00.01

FULL FILE PROJECTIONS: ONLINE \*\*COMPLETE\*\*

BATCH \*\*COMPLETE\*\*

PROJECTED VERIFICATIONS: 81160 TO 88960  
PROJECTED ANSWERS: 4 TO 199

L2 4 SEA SSS SAM L1 ( 50 REACTIONS)

=> s 11 full

FULL SEARCH INITIATED 15:31:59 FILE 'CASREACT'  
SCREENING COMPLETE - 102162 REACTIONS TO VERIFY FROM 6508 DOCUMENTS

100.0% DONE 102162 VERIFIED 221 HIT RXNS ( 3 INCOMP) 44 DOCS  
SEARCH TIME: 00.00.02

L3 44 SEA SSS FUL L1 ( 221 REACTIONS)

=> d his

(FILE 'HOME' ENTERED AT 15:31:21 ON 11 OCT 2007)

FILE 'CASREACT' ENTERED AT 15:31:37 ON 11 OCT 2007

L1 STRUCTURE uploaded  
L2 4 S L1  
L3 44 S L1 FULL

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FILE COVERS 1907 - 11 Oct 2007 VOL 147 ISS 16

FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply.  
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=> s 13

L4 44 L3

=> d 14 1-44 ibib abs hitrn

L4 ANSWER 1 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2007:998812 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*147:323232\*\*\*  
 TITLE: Novel method for the preparation of stavudine polymorphic forms I and II  
 INVENTOR(S): Di Lernia, Gianluca; Mancini, Alfredo; Mancini, Franco; Serra, Maurizio; Vergani, Domenico  
 PATENT ASSIGNEE(S): Archimica Srl, Italy  
 SOURCE: PCT Int. Appl., 16pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
**PATENT INFORMATION:**  

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007099082	A1	20070907	WO 2007-EP51812	20070226
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

 PRIORITY APPLN. INFO.: IT 2006-MI360 A 20060228  
 OTHER SOURCE(S): CASREACT 147:323232  
 AB A novel method for the prepn. of stavudine polymorphic forms I and II is described; it's prep'd. starting from 5'-acetate-2',3'-dideoxy-5-methyluridine. The 5'-acetate-2',3'-dideoxy-5-methyluridine, by reaction with catalytic amts. of sodium methoxide in a C1-C4 alc. solvent, gives crude stavudine form II. Crude stavudine form II, which doesn't need to be isolated or purified, can be converted into polymorphic form I by slurry at reflux in isopropanol.  
 REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT  

L4 ANSWER 2 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:1302441 CAPLUS <<LOGINID::20071011>>  
 DOCUMENT NUMBER: \*\*\*144:163592\*\*\*  
 TITLE: Synthesis and antiviral activity of aryl phosphoramidate derivatives of .beta.-D- and .beta.-L-C-5-Substituted 2',3'-didehydro-2',3'-dideoxy-uridine bearing linker arms  
 AUTHOR(S): Laduree, Daniel; Fossey, Christine; Delbederi, Zoica; Sugeac, Elena; Schmidt, Sylvie; Laumond, Geraldine; Aubertin, Anne-Marie  
 CORPORATE SOURCE: U.F.R. des Sciences Pharmaceutiques, Centre d'Etudes et de Recherche sur le Medicament de Normandie, Caen, F-14032, Fr.  
 SOURCE: Journal of Enzyme Inhibition and Medicinal Chemistry (2005), 20(6), 533-549  
 CODEN: JEIMAZ; ISSN: 1475-6366  
 PUBLISHER: Taylor & Francis Ltd.  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 144:163592  
 AB The authors have previously reported the synthesis and evaluation of potent anti-human immunodeficiency virus compds. based on .beta.-D-d4T

analogs bearing a tether attached at the C-5 position and their .beta.-L-counterparts. Initial study revealed a requirement for an alkyl side-chain with an optimal length of 12 carbons for a weak antiviral activity. As a continuation of that work, the authors have now prep'd. the corresponding phosphoramidate derivs. as possible membrane-permeable prodrugs. Phosphorochloridate chem. gave the target phosphoramidates which were tested for anti-human immunodeficiency virus type 1 activity; unfortunately, they were devoid of anti-HIV activity.

REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 3 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:1197412 CAPLUS <>LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*145:419404\*\*\*  
TITLE: Unusual olefin formation by PhSe-F trans-elimination  
AUTHOR(S): Du, Jinfa; Shi, Junxing; Chun, Byoung-Kwon; Hobbs, Ann; Hollecker, Laurent; Watanabe, Kyoichi A.  
CORPORATE SOURCE: Pharmasset, Inc., Tucker, GA, USA  
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2005), 24(9), 1289-1292  
CODEN: NNNAFY; ISSN: 1525-7770  
PUBLISHER: Taylor & Francis, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 145:419404  
GI

/ Structure 12 in file .gra /

AB A new approach to the synthesis of a 2',3'-didehydro-2',3'-dideoxynucleoside I was described. The reaction was carried out in excellent yield through unusual olefin formation by PhSe-F trans-elimination.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:1094206 CAPLUS <>LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*143:347399\*\*\*  
TITLE: Method for preparing 2',3'-dideoxycytidine  
INVENTOR(S): Lu, Jinkang; Wang, Xinhua  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 8 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1563030	A	20050112	CN 2004-10014350	20040315
PRIORITY APPLN. INFO.:			CN 2004-10014350	20040315

OTHER SOURCE(S): CASREACT 143:347399

AB The title method comprises allowing cytidine to react with acetic anhydride to get 4-N-acetylcytidine, reacting 4-N-acetylcytidine with a satd. acetic acid soln. of hydrogen bromide with acetic anhydride as catalyst to get a bromide mixt.; reacting to get 4-N-acetyl-2',3'-didehydro-2',3'-dideoxycytidine-5'-acetate with zinc copper couple as catalyst; hydrogenating in the presence of Pd/C to get

4-N-acetyl-2',3'-dideoxyguanosine-5'-acetate; and reacting at the presence of methanol and triethylamine to get 2',3'-dideoxycytidine. The invention has the advantages of simple technique, easy operation, easily-accessible raw material, and high yield exceeding 90%.

L4 ANSWER 5 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:582511 CAPLUS <>LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*143:78442\*\*\*  
TITLE: A process for the production of purine didehydronucleoside compounds via elimination reaction using perfluoro-alkane-sulfonyl fluoride  
INVENTOR(S): Torii, Takayoshi; Onishi, Tomoyuki; Izawa, Kunisuke  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
SOURCE: Eur. Pat. Appl., 24 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1550665	A1	20050706	EP 2004-30327	20041221
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, BA, HR, IS, YU				
JP 2005206585	A	20050804	JP 2004-368351	20041220
US 2005171126	A1	20050804	US 2004-16741	20041221
PRIORITY APPLN. INFO.:			JP 2003-434009	A 20031226
OTHER SOURCE(S):	CASREACT 143:78442; MARPAT 143:78442			

GI

/ Structure 13 in file .gra /

AB The invention provides a process wherein a 3'-deoxy-3'-halopurine nucleoside compd. is treated with perfluoroalkanesulfonyl fluoride in the presence of a base to give a 2',3'-didehydro-2',3'-dideoxy-purine nucleosides. The resulting compd. may be subjected to a catalytic hydrogenolysis to obtain a 2',3'-dideoxypurine nucleoside I, wherein B is purine nucleobase; R is a protective group. Thus, 5'-O-acetyl-2',3'-dideoxyadenosine was prep'd. from 5'-O-acetyl-3'-deoxy-3'.beta.-bromoadenosine via elimination reaction of 5'-O-acetyl-2',3'-didehydro-2',3'-dideoxyadenosine in good yield.

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 6 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:552720 CAPLUS <>LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*140:111616\*\*\*  
TITLE: Synthesis of triazole nucleoside derivatives  
AUTHOR(S): Li, Zicheng; Chen, Shuhua; Jiang, Ning; Cui, Gang  
CORPORATE SOURCE: Faculty of Chemistry, Sichuan University, Sichuan, Peop. Rep. China  
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2003), 22(4), 419-435  
CODEN: NNNAFY; ISSN: 1525-7770  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal

LANGUAGE: English  
OTHER SOURCE(S): CASREACT 140:111616  
GI

/ Structure 14 in file .gra /

AB 5'-O-Mesyl-2',3'-O-isopropylidene ribonucleosides were converted to their 5'-substituted nucleosides in good yields by reacted with NaN<sub>3</sub> or KI. 2',3'-O-Isopropylidene ribonucleosides were prep'd. in good yields from ribonucleosides I (R = CONH<sub>2</sub>, NO<sub>2</sub>; R<sub>1</sub> = OH) with a reaction mixt. of acetone and tri-Et orthoformate instead of using acetone di-Et acetal. Compds. I were treated with 2-acetoxyisobutyryl halide (Cl or Br) to give 1-[2-O-acetyl-3-halo-3-deoxy-5-O-(2,5,5-trimethyl-1,3-dioxolan-4-on-2-yl)-.beta.-D-xylofuranosyl]-1,2,4-triazole-3-carboxamide in high yields using 2-acetoxyisobutyryl bromide, the mixt. of 2-acetoxyisobutyryl chloride and NaBr. Triazole nucleosides, e.g. I (R = NH<sub>2</sub>, R<sub>1</sub> = H, NH<sub>2</sub>) were prep'd. and tested as antiviral and antitumor agents. The biol. activity of title compds. was examd. in human liver cancer cells (A-549), lung cancer cells (BEL-7402), and Flu-A cells.

REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 7 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:502075 CAPLUS <>LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*139:214647\*\*\*

TITLE: 2'-Chloro-2',3'-dideoxy-3'-fluoro-D-ribonucleosides: Synthesis, Stereospecificity, Some Chemical Transformations, and Conformational Analysis

AUTHOR(S): Mikhailopulo, Igor A.; Pricota, Tamara I.; Sivets, Grigorii G.; Altona, Cornelis

CORPORATE SOURCE: Institute of Bioorganic Chemistry, National Academy of Sciences, Minsk, 220141, Belarus

SOURCE: Journal of Organic Chemistry (2003), 68(15), 5897-5908  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 139:214647

AB The synthesis of Me 5-O-benzoyl-2-chloro-2,3-dideoxy-3-fluoro-.beta.-D-ribofuranoside and its use as a glycosylating agent for persilylated thymine, N6-benzoyladenine, and N4-benzoylcytosine are described. The 2'-chloro-2',3'-dideoxy-3'-fluoro-D-ribonucleosides synthesized were transformed to 2',3'-dideoxy-3'-fluoro-.alpha.- and -.beta.-D-erythro-pentofuranoside nucleosides of thymine, adenine, and cytidine by treatment with tributyltin hydride in the presence of .alpha.,.alpha.'-azobisisobutyronitrile. Treatment of 2'-chloro-2',3'-dideoxy-3'-fluoro-D-ribonucleosides with 1 M MeONa/MeOH under reflux for 1-5 h afforded 2',3'-didehydro-2',3'-dideoxy-2'-chloro-D-pentofuranosyl nucleosides as the principal products (47-81%) of the reaction, along with recovered starting nucleoside. Easy HF elimination was also obsd. in the case of the 2'-azido-2',3'-dideoxy-3'-fluoro-.beta.-D-ribofuranosides of thymine and adenine. The role of conformational peculiarities of 2'-chloro-2',3'-dideoxy-3'-fluoro-D-ribonucleosides in the obsd. exclusive elimination of HF is discussed. The conformational anal. of a rather broad palette of 2,3-dideoxy-3-fluoro-2-(X-substituted)-D-ribofuranosides was performed with the aid of the PSEUROT (version 6.3) program, using (i) the recently re-parametrized Karplus-type relation (Chattopadhyaya, J. Org. Chem. 1998, 63, 4967) and (ii) empirical bond angle correction terms suggested by us. The predictive power of the Brunck and Weinhold model (J. Am. Chem. Soc. 1979, 101, 1700) of the gauche effect between atoms and

groups as a conformational driving force acting upon the pentofuranose ring is explored.

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 8 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:389753 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*139:345311\*\*\*  
TITLE: Synthesis and Anti-HIV Activity of Some Heterodimers [NRTI]-Glycyl-Succinyl-[Trovirdine Analogue] of Known HIV-1 Reverse Transcriptase Inhibitors  
AUTHOR(S): Sugeac, Elena; Fossey, Christine; Laduree, Daniel; Schmidt, Sylvie; Laumond, Geraldine; Aubertin, Anne-Marie  
CORPORATE SOURCE: Centre d'Etudes et de Recherche sur le Medicament de Normandie, Pharmaceutiques, U.F.R. des Sciences, Caen, F-14032, Fr.  
SOURCE: Journal of Enzyme Inhibition and Medicinal Chemistry (2003), 18(2), 175-186  
CODEN: JEIMAZ; ISSN: 1475-6366  
PUBLISHER: Taylor & Francis Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 139:345311  
AB Expected for their ability to inhibit HIV replication, four heterodimers with a Nucleoside Reverse Transcriptase Inhibitor (NRTI) and a Non-Nucleoside Reverse Transcriptase Inhibitor (NNRTI) bound by a linker arm were designed and synthesized. For the NRTIs, d4U, d2U, d4T and 5'-O-acetyl-5-(3-hydroxypropynyl)d2U were chosen. For the NNRTI, a Trovirdine Analog (belonging to the phenethylthiazolylthiourea class) was chosen. The conjugation of the two different inhibitors (NRTI and NNRTI) was performed using the succinyl-glycine moiety as a spontaneously cleavable linker.

REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 9 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2003:123466 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*138:137526\*\*\*  
TITLE: Preparation of 2',3'-didehydro-3'-deoxythymidine  
INVENTOR(S): Yao, Qizheng; Lu, Gang  
PATENT ASSIGNEE(S): China Pharmacy Univ., Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1324800	A	20011205	CN 2001-113661	20010601
PRIORITY APPLN. INFO.:			CN 2001-113661	20010601

OTHER SOURCE(S): CASREACT 138:137526; MARPAT 138:137526

AB Stavudine (2',3'-didehydro-3'-deoxythymidine) as antiviral agent is synthesized by dehydrating 5-methyluridine with di-C1- 4 alkyl or di-Ph carbonate (at a molar ratio of 1.1-1.5) in anhyd. polar solvent (such as DMF or DMA) in the presence of base (such as NaHCO3 or KHCO3) at 90-150.degree. to obtain 2,2'-anhydro-5-methyluridine; acylating and halogenating with C1- 6 acyl halide (or org. anhydride-org. acid-NaBr and/or H2SO4, or org. anhydride-pyridinium bromide perbromide) in polar solvent (such as acetonitrile, DMF, or Et acetate) at 50-75.degree. to

obtain 2'-halo-3',5'-O-diacylthymidine (halo = Cl, Br, or I); reductive eliminating with metal reductant (such as Zn or Zn-Cu) in methanol or ethanol and/or Et acetate in the presence of acid (such as acetic acid or propanoic acid) at 5-35.degree.; and hydrolyzing with base (such as Na methoxide or NH<sub>3</sub>) in methanol or ethanol and/or dioxane.

L4 ANSWER 10 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2002:695994 CAPLUS <>LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*137:217180\*\*\*  
TITLE: Method for the synthesis of 2',3'-dideoxy-2',3'-didehydronucleosides  
INVENTOR(S): Jin, Fuqiang; Confalone, Pasquale N.  
PATENT ASSIGNEE(S): Pharmasset Ltd., USA  
SOURCE: PCT Int. Appl., 180 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002070533	A2	20020912	WO 2002-US6460	20020301
WO 2002070533	A3	20021219		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
CA 2439836	A1	20020912	CA 2002-2439836	20020301
AU 2002255654	A1	20020919	AU 2002-255654	20020301
US 2002198224	A1	20021226	US 2002-87112	20020301
US 6927291	B2	20050809		
EP 1363927	A2	20031126	EP 2002-725067	20020301
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
CN 1505635	A	20040616	CN 2002-808914	20020301
BR 2002007746	A	20040629	BR 2002-7746	20020301
JP 2004527504	T	20040909	JP 2002-569852	20020301
NZ 540956	A	20070126	NZ 2002-540956	20020301
ZA 2003006739	A	20040901	ZA 2003-6739	20030828
MX 2003PA07853	A	20040524	MX 2003-PA7853	20030901
IN 2003DN01529	A	20061222	IN 2003-DN1529	20030924
US 2005250946	A1	20051110	US 2005-182862	20050718
IN 2005DN04086	A	20070824	IN 2005-DN4086	20050912
IN 2005DN04087	A	20070824	IN 2005-DN4087	20050912
IN 2005DN04088	A	20070824	IN 2005-DN4088	20050912
IN 2005DN04090	A	20070824	IN 2005-DN4090	20050912
PRIORITY APPLN. INFO.:			US 2001-272434P	P 20010301
			US 2001-272441P	P 20010301
			US 2002-87112	A3 20020301
			WO 2002-US6460	W 20020301
			IN 2003-DN1529	A3 20030924

OTHER SOURCE(S): CASREACT 137:217180; MARPAT 137:217180

AB The present invention is an efficient synthetic route to 2',3'-dideoxy-2',3'-didehydro-nucleosides from available precursors with the option of introducing functionality as needed, such as, the 2',3'-dideoxy- and 2'- or 3'-deoxyribo-nucleoside analogs as well as

addnl. derivs. obtained by subsequent functional group manipulations. Briefly, the present invention discloses a method for the prepn. of .beta.-D- and .beta.-L-2',3'-dideoxy-2',3'-didehydro-nucleosides starting from appropriately substituted ribonucleosides in two, optionally three steps: step (1) a halo-acylation, such as halo-acetylation, and in particular, bromo-acetylation; step (2) a reductive elimination; and optionally, step (3) a deprotection. The halo-acylation of step (1) can form the 2'-acyl-3'-halo-nucleoside, the 3'-acyl-2'-halo-nucleoside, or a mixt. thereof.

L4 ANSWER 11 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2002:325330 CAPLUS <<LOGINID::20071011>>  
 DOCUMENT NUMBER: \*\*\*138:73449\*\*\*  
 TITLE: Synthesis of Stavudine  
 AUTHOR(S): Jin, Li-ren; Jiang, Hong-ping; Hou, Peng-yi  
 CORPORATE SOURCE: Dept. of Chem., Xiamen Univ., Xiamen, 361005, Peop. Rep. China  
 SOURCE: Xiamen Daxue Xuebao, Ziran Kexueban (2002), 41(2), 207-210  
 CODEN: HMHHAF; ISSN: 0438-0479  
 PUBLISHER: Xiamen Daxue  
 DOCUMENT TYPE: Journal  
 LANGUAGE: Chinese  
 OTHER SOURCE(S): CASREACT 138:73449  
 AB Title compd., synthesized from ribofuranose tetraacetate and thymine via the intermediate 5-methyluridine, was described. Ribofuranose tetraacetate was condensed with bis(trimethylsilyl)thymine followed by deacylation to give 5-methyluridine, then converted to 2',3'-olefinic nucleoside by reductive elimination of 2'-bromo-3'-mesylic ester. The final product was obtained from deprotection of the hydroxy group with total yield 46.4%.

L4 ANSWER 12 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:762991 CAPLUS <<LOGINID::20071011>>  
 DOCUMENT NUMBER: \*\*\*135:304107\*\*\*  
 TITLE: Process for preparing 5'-acetylstavudine by the reductive elimination reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine  
 INVENTOR(S): Bertolini, Giorgio; Frigerio, Marco; Velati, Maurizio; Petrucciani, Luigi  
 PATENT ASSIGNEE(S): Clariant Life Science Molecules, Italy  
 SOURCE: PCT Int. Appl., 12 pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077103	A1	20011018	WO 2001-IB588	20010410
W: BR, HU, JP, KR, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
IT 2000MI0810	A1	20011012	IT 2000-MI810	20000412
IT 1318463	B1	20030825		
EP 1274704	A1	20030115	EP 2001-917385	20010410
EP 1274704	B1	20040114		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
BR 2001009965	A	20030527	BR 2001-9965	20010410
HU 200300259	A2	20030628	HU 2003-259	20010410

JP 2003530394	T	20031014	JP 2001-575576	20010410
AT 257835	T	20040115	AT 2001-917385	20010410
ES 2213109	T3	20040816	ES 2001-1917385	20010410
US 2001039342	A1	20020226	US 2001-834028	20010412
MX 2002PA10072	A	20030310	MX 2002-PA10072	20021011
PRIORITY APPLN. INFO.:			IT 2000-MI810	A 20000412
			WO 2001-IB588	W 20010410

OTHER SOURCE(S): CASREACT 135:304107

AB 5'-Acetylstavudine is prep'd. in high yield and selectivity by the reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine in the presence of zinc as reducing agent combined with an activating agent which is an ammonium salt (e.g., triethylammonium hydrochloride) and/or a phosphonium salt in a dipolar aprotic solvent (e.g., DMF).

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 13 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:735911 CAPLUS <>LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*136:37877\*\*\*

TITLE: Synthesis of 9-(2,3-Dideoxy-2-fluoro-.beta.-D-threo-pentofuranosyl)adenine (FddA) via a Purine 3'-Deoxynucleoside

AUTHOR(S): Takamatsu, Satoshi; Maruyama, Tokumi; Katayama, Satoshi; Hirose, Naoko; Naito, Masaki; Izawa, Kunisuke AminoScience Laboratories, Ajinomoto Co., Inc., Suzuki-cho, Kawasaki-ku, Kawasaki, Kanagawa, 210-8681, Japan

SOURCE: Journal of Organic Chemistry (2001), 66(22), 7469-7477  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:37877

AB A synthesis of 9-(2,3-dideoxy-2-fluoro-.beta.-D-threo-pentofuranosyl)adenine (FddA) via a 6-chloro-9-(3-deoxy-.beta.-D-erythro-pentofuranosyl)-9H-purine, which was readily obtained from inosine, is described. Fluorination at the C2'-.beta. position of the purine 3'-deoxynucleoside with diethylaminosulfur trifluoride was improved by the introduction of a 6-chloro group and proceeded in moderate yield. Purine 3'-deoxynucleoside derivs. were also subjected to nucleophilic reactions with triethylamine trihydrofluoride and gave the desired fluorinated nucleoside in good yield. The safety and yield of the fluorination process were greatly improved by the use of triethylamine trihydrofluoride. The influence of the sugar ring conformation and 6-chloro group on the rate of the nucleophilic reaction against elimination are also discussed.

REFERENCE COUNT: 25 THERE ARE 25 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 14 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:710913 CAPLUS <>LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*136:86017\*\*\*

TITLE: Synthesis of 5-alkenylated D4T analogs via the Pd-catalyzed cross-coupling reaction

AUTHOR(S): Ciurea, A.; Fossey, C.; Benzaria, S.; Gavriliu, D.; Delbederi, Z.; Lelong, B.; Laduree, D.; Aubertin, A. M.; Kirn, A.

CORPORATE SOURCE: Centre d'Etudes et de Recherche sur le Medicament de Normandie U.F.R. des Sciences Pharmaceutiques, Caen, 14032, Fr.

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2001), 20(9), 1655-1670

CODEN: NNNAFY; ISSN: 1525-7770

PUBLISHER: Marcel Dekker, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:86017

AB The target compds. 5-[N-(6-amino-hexyl)-acrylamide]-2',3'-dideohydro-2',3'-dideoxy-uridine (I) and 5-[N-[5-(methoxycarbonyl)-pentyl]-acrylamide]-2',3'-dideohydro-2',3'-dideoxy-uridine (II) were prepd. by the palladium acetate-triphenylphosphine-catalyzed reaction of the 5'-O-acetyl-5-iodo-d4T analog. These compds. I and II can be used to prep. nucleotide probes carrying fluorescent labels and were nevertheless screened for their anti-HIV activity. The biol. data demonstrated that none of them were active against HIV-1.

REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 15 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:675236 CAPLUS <<LOGINID::20071011>>

\*\*\*136:118684\*\*\*

TITLE: Synthesis of haptens for the development of immunoassays for the monitoring of intracellular anti-HIV nucleosides and nucleotides

AUTHOR(S): Brossette, T.; Klein, E.; Creminon, C.; Grassi, J.; Mioskowski, C.; Lebeau, L.

CORPORATE SOURCE: Faculte de Pharmacie, Laboratoire de Synthese Bioorganique, Universite Louis Pasteur de Strasbourg, CNRS, Illkirch, 67 401, Fr.

SOURCE: Tetrahedron (2001), 57(38), 8129-8143

CODEN: TETRAB; ISSN: 0040-4020

PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 136:118684

GI

/ Structure 15 in file .gra /

AB A series of nine modified dideoxynucleosides, e.g. I (R1 = H), and dideoxynucleotides, e.g. I (R1 = PO3H2) has been synthesized for prepg. antigenic conjugates with keyhole limpet haemocyanin in order to produce specific antibodies, and develop immunoassays. Derivs. of ddI, ddA, d4T, 3TC, and the corresponding 5'-O-monophosphates were designed incorporating an amino spacer at the base for conjugation with the proteinic antigenic carrier.

REFERENCE COUNT: 52 THERE ARE 52 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 16 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:791143 CAPLUS <<LOGINID::20071011>>

\*\*\*134:71824\*\*\*

TITLE: Synthesis and antiviral activity of C-5 substituted .beta.-D- and .beta.-L-D4t analogues

AUTHOR(S): Delbederi, Z.; Fossey, C.; Fontaine, G.; Benzaria, S.; Gavriliu, D.; Ciurea, A.; Lelong, B.; Laduree, D.; Aubertin, A. M.; Kirn, A.

CORPORATE SOURCE: Centre d'Etudes et de Recherche sur le Medicament de Normandie U.F.R. des Sciences Pharmaceutiques, Caen, 14032, Fr.

SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2000),  
19(9), 1441-1461  
CODEN: NNNAFY; ISSN: 1525-7770  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 134:71824  
AB A series of .beta.-D-2',3'-dideoxy-nucleosides bearing a tether attached at the C-5 position and their .beta.-L-counterparts was synthesized. Their inhibitory activities against human immunodeficiency virus (HIV) were investigated and compared to establish relationship(s) between compd. structure and their antiviral activity. No significant activity was obsd. for most .beta.-D- and .beta.-L-modified nucleosides, but 5-[N-(12-aminododecyl)carbamoylmethyl]-1-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)uracil and its .beta.-L-counterpart exhibited a weak activity against HIV-1.  
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 17 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2000:429517 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*133:193397\*\*\*  
TITLE: Synthesis and antiviral activity of C-5 substituted analogs of d4T bearing methylamino- or methyldiamino-linker arms  
AUTHOR(S): Gavriliu, D.; Fossey, C.; Fontaine, G.; Benzaria, S.; Ciurea, A.; Delbederi, Z.; Lelong, B.; Laduree, D.; Aubertin, A. M.; Kirn, A.  
CORPORATE SOURCE: Centre d'Etudes et de Recherche sur le Medicament de Normandie U.F.R. des Sciences Pharmaceutiques, Caen, 14032, Fr.  
SOURCE: Nucleosides, Nucleotides & Nucleic Acids (2000), 19(5 & 6), 1017-1031  
CODEN: NNNAFY; ISSN: 1525-7770  
PUBLISHER: Marcel Dekker, Inc.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 133:193397  
GI

/ Structure 16 in file .gra /

AB A general strategy is reported for the prepn. of C-5-methylamino- or methyldiamino-d4T analogs of "different sizes". Reactions of the 2',3'-dideohydro-2',3'-dideoxy-C-5 hydroxymethyl precursor I(R = OH) with either polymethylene diamines NH<sub>2</sub>(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub>COCF<sub>3</sub> (n = 6, 8, 10 and 12) or propargylamine proceed regioselectively via substitution reactions at the C-5 position of uracil. The compds. were evaluated for antiviral activity and cytotoxicity. No significant activity was obsd. for compds. I (R = NH(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub>COCF<sub>3</sub>; n = 9, 11, 13), but I (R = NH(CH<sub>2</sub>)<sub>n</sub>NH<sub>2</sub>COCF<sub>3</sub>; n = 10, 12) exhibited a weak activity against HIV-1.  
REFERENCE COUNT: 33 THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 18 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1999:275269 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*130:325330\*\*\*  
TITLE: Synthesis of L-analogs of 1-(2',3'-dideoxy-.beta.-D-glyceropent-2-enofuranosyl)thymine  
AUTHOR(S): Camara, F.; Ciurea, A.; Delbederi, Z.; Fossey, C.;

Fontaine, G.; Gavriliu, D.; Jouenne, J.; Laduree, D.;  
Aubertin, A. M.; Kirn, A.

CORPORATE SOURCE: Centre d'Etudes et de Recherche sur le Medicament de  
Normandie, Laboratoire de Pharmacochimie, UFR des  
Sciences Pharmaceutiques, Caen, 14032, Fr.

SOURCE: Pharmacy and Pharmacology Communications (1999), 5(3),  
225-231

CODEN: PPCOFN; ISSN: 1460-8081

PUBLISHER: Royal Pharmaceutical Society of Great Britain

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 130:325330

AB .beta.-L(-)-2',3'-Dideoxy-3'-thiacytidine (3TC), its 5-fluoro deriv.  
((-)-FTC), 2',3'-dideoxycytidine (.beta.-L-ddC), and its 5-fluoro deriv.  
(.beta.-L-FddC) have been reported to have anti-HIV and anti-HBV activity.  
It was of particular interest therefore to develop a series of  
.beta.-L-d4T analogs bearing several kinds of amino-linker arms at the C-5  
position of the pyrimidine moiety in an attempt to find more potent and  
less toxic anti-HIV agents. In addn., modification of nucleosides with  
various functional mols. has been attracting wide interest in biol.  
studies since the primary amino groups could be useful for the attachment  
of either fluorescent dyes or a non-nucleosidic reverse transcriptase  
inhibitor. These modified nucleosides were evaluated for antiviral  
activity against HIV-1LAI in CEM-SS cells and HIV-1LIIIB in MT4 cells.  
Unfortunately, none of the compds. exhibited significant anti-HIV activity  
at the doses tested.

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 19 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:121891 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*128:180621\*\*\*

TITLE: Synthesis of analogs of 1-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)thymine

AUTHOR(S): Fontaine, G.; Lequenne, C.; Fossey, C.;  
Renoud-Grappin, M.; Laduree, D.

CORPORATE SOURCE: Laboratoire de Pharmacochimie, Centre d'Etudes et de  
Recherche sur le Medicament de Normandie, UFR des  
Sciences Pharmaceutiques, Caen, 14032, Fr.

SOURCE: Pharmacy and Pharmacology Communications (1998), 4(1),  
17-22

CODEN: PPCOFN; ISSN: 1460-8081

PUBLISHER: Royal Pharmaceutical Society of Great Britain

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 128:180621

AB This work describes the synthesis of three new anti-HIV analogs of  
1-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)thymine by two  
different routes. The compds. were functionalized on the 5-position by a  
carboalkoxymethyl group. The C-5 substituent on the pyrimidine ring was a  
precursor for subsequent linkage with a non-nucleosidic moiety.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 20 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1998:106893 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*128:167643\*\*\*

TITLE: A new thymine free synthesis of the anti-AIDS drug d4T  
via regio/stereo controlled .beta.-elimination of  
bromoacetates

AUTHOR(S): Chen, Bang-Chi; Quinlan, Sandra L.; Reid, J. Gregory;  
Spector, Richard H.

CORPORATE SOURCE: Process Exploration Labs I, Technical Operations,  
Bristol-Myers Squibb Company, Syracuse, NY, 13221, USA  
SOURCE: Tetrahedron Letters (1998), 39(8), 729-732  
CODEN: TELEAY; ISSN: 0040-4039  
PUBLISHER: Elsevier Science Ltd.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 128:167643

AB The anti-AIDS drug d4T was prep'd. without contamination of the nucleoside bond cleaved byproduct thymine from the readily available ribonucleoside 5-methyluridine. This was accomplished by using a new strategy which involved a regio/stereo controlled .beta.-elimination of trans-bromoacetates.

REFERENCE COUNT: 17 THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 21 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1997:349375 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*127:50881\*\*\*  
TITLE: Highly functionalized cyclopentanes by radical cyclization of unsaturated bromolactones. I. Preparation of 5-deoxycarbahexofuranoses  
AUTHOR(S): Horneman, Anne Marie; Lundt, Inge  
CORPORATE SOURCE: Department of Organic Chemistry, Technical University of Denmark, Lyngby, DK-2800, Den.  
SOURCE: Tetrahedron (1997), 53(20), 6879-6892  
CODEN: TETRAB; ISSN: 0040-4020  
PUBLISHER: Elsevier  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 127:50881

AB Three carbasugars: 5-Deoxycarba-.alpha.-L-xylo-hexofuranose, 5-deoxycarba-.alpha.-L-lyxo-hexofuranose and 5-deoxycarba-.beta.-D-lyxo-hexofuranose have been prep'd. starting from readily available 2,7-dibromo-2,7-dideoxy-D-glycero-D-ido-heptono-1,4-lactone and 2,7-dibromo-2,7-dideoxy-D-glycero-L-gluco-heptono-1,4-lactone. 2,3-Unsatd. 7-bromo-7-deoxy-heptono-1,4-lactones were prep'd. by reductive elimination of the starting compds. The key step was a highly regio- and stereoselective 5-exo-trig radical cyclization of the unsatd. bromolactones to give bicyclic cyclopentane derivs. The lactone moiety of these compds. were reduced using H3B - S(CH3)2 to give the above-mentioned carbahexofuranoses.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 22 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1996:109056 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*124:290128\*\*\*  
TITLE: Synthesis of 1-(2,3-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)thymine (d4T; stavudine) from 5-methyluridine  
AUTHOR(S): Shiragami, Hiroshi; Ineyama, Takashi; Uchida, Yumiko; Izawa, Kinisuke  
CORPORATE SOURCE: Central Res. Labs., Ajinomoto Co., Inc., Kawasaki, 210, Japan  
SOURCE: Nucleosides & Nucleotides (1996), 15(1-3), 47-58  
CODEN: NUNUD5; ISSN: 0732-8311  
PUBLISHER: Dekker  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 124:290128  
GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A practical synthetic method of d4T (I) from 5-methyluridine (II) was developed. The Marumoto-Mansuri method was modified using 2',3'-O-methoxyethylidene-5-methyluridine (III) as an intermediate to afford 1-(3,5-di-O-acetyl-2-bromo-2-deoxy-.beta.-D-ribofuranosyl)thymine (IV) in high yield with less formation of byproducts. The reaction mechanism was also discussed.

L4 ANSWER 23 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1996:53061 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*124:202920\*\*\*

TITLE: Allylic Substitution of 3',4'-Unsaturated Nucleosides:  
Organosilicon-Based Stereoselective Access to  
4'-C-Branched 2',3'-Didehydro-2',3'-  
dideoxyribonucleosides

AUTHOR(S): Haraguchi, Kazuhiro; Tanaka, Hiromichi; Itoh,  
Yoshiharu; Yamaguchi, Kentaro; Miyasaka, Tadashi

CORPORATE SOURCE: School of Pharmaceutical Sciences, Showa University,  
Tokyo, 142, Japan

SOURCE: Journal of Organic Chemistry (1996), 61(3), 851-8  
CODEN: JOCEAH; ISSN: 0022-3263

PUBLISHER: American Chemical Society

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 124:202920

GI

/ Structure 17 in file .gra /

AB Reactions of organosilicon reagents (such as allyltrimethylsilane, silyl enol ethers, cyanotrimethylsilane) with 3',4'-unsatd. nucleosides, e.g. I (R = Ac, Bz, TBDPS), were investigated in the presence of a Lewis acid in CH<sub>2</sub>Cl<sub>2</sub>. In the cases of uracil and N4-acetylcytosine derivs., SnCl<sub>4</sub> appeared to be suitable, whereas the use of EtAlCl<sub>2</sub> was necessary for the hypoxanthine derivs. The main pathway of these reactions was found to be .alpha.-face-selective SN2' allylic substitution, irresp. of the configuration of 2'-O-acyl leaving group. As a result, a new stereoselective operation for C-C bonds formation leading to 4'-carbon-substituted 2',3'-didehydro-2',3'-dideoxyribonucleosides, e.g. II (R = Ac, Bz, TBDPS), has been disclosed for the first time. Stereochem. of these 4'-C-branched products can be assigned on the basis of <sup>1</sup>H NMR spectroscopy in terms of the anisotropic shift of H-5 of the pyrimidine base (or H-8 of the hypoxanthine), which is caused by the 5'-O-(tert-butyldiphenylsilyl) protecting group.

L4 ANSWER 24 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1995:548871 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*123:144491\*\*\*

TITLE: Synthesis of 5'-halo-2',3'-lyxo-epoxy and  
2',3'-unsaturated thieno[3,2-d]pyrimidine nucleosides

AUTHOR(S): Rossey, Christine; Laduree, Daniel; Robba, Max

CORPORATE SOURCE: U.F.R. des Sciences Pharmaceutiques, Centre d'Etudes et de Recherche sur le Medicament de Normandie, Caen,

SOURCE: 14032, Fr.  
Journal of Heterocyclic Chemistry (1995), 32(2),  
627-35  
CODEN: JHTCAD; ISSN: 0022-152X  
PUBLISHER: HeteroCorporation  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 123:144491  
GI

/ Structure 18 in file .gra /

AB A series of thieno[3,2-d]pyrimidine-2,4-dione nucleosides, e.g. I and II, modified in the carbohydrate moiety has been synthesized. However, none of the compds. in this series exhibited significant antiviral activity against HIV at the doses tested.

L4 ANSWER 25 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1995:83000 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*122:10448\*\*\*  
TITLE: Nucleosides. III. Investigation of the electrochemical synthesis of N4,05'-diacetyl-2',3'-dideoxy-2',3'-didehydrocytidine  
AUTHOR(S): Johansen, Oddvar; Marcuccio, Sebastian M.; Mau, Albert W.-H.  
CORPORATE SOURCE: Div. Chemicals Polymers, CSIRO, Clayton, 3169, Australia  
SOURCE: Australian Journal of Chemistry (1994), 47(10), 1843-50  
CODEN: AJCHAS; ISSN: 0004-9425  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 122:10448  
GI

/ Structure 19 in file .gra /

AB The influence of the reaction conditions on the yield of dideoxypyrimidine I, by electrochem. synthesis from bromodeoxycytidine II, has been studied in order to evaluate the potential of this reaction for synthesis on a larger scale. We have characterized the half-wave potentials of the precursor II and the product I by polarog. under various conditions, and found that redn. in the base moiety can easily take place giving byproducts. Furthermore, this redn. consumes protons leading to rapid solvolysis in protic solvents. We have demonstrated for the first time that I can be formed near quant. in both protic and aprotic solvents. The success of the synthesis of I as well as of other 2',3'-dideoxy-2',3'-didehydro nucleosides also depends to a large extent on how uniform the c.d. across the working electrode surface can be maintained during electrolysis.

L4 ANSWER 26 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1995:64940 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*123:9835\*\*\*  
TITLE: Small-Molecule Immunostimulants. Synthesis and Activity of 7,8-Disubstituted Guanosines and

## Structurally Related Compounds

AUTHOR(S): Reitz, Allen B.; Goodman, Michael G.; Pope, Barbara L.; Argentieri, Dennis C.; Bell, Stanley C.; Burr, Levelle E.; Chourmouzis, Erika; Come, Jon; Goodman, Jacquelyn H.; et al.

CORPORATE SOURCE: Medicinal Chemistry Department, R. W. Johnson Pharmaceutical Research Institute, Spring House, PA, 19477, USA

SOURCE: Journal of Medicinal Chemistry (1994), 37(21), 3561-78  
CODEN: JMCMAR; ISSN: 0022-2623

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 123:9835

AB A series of 7,8-disubstituted guanosine derivs. was designed and prep'd. as potential B-cell-selective activators of the humoral immune response. These compds. were evaluated for their ability to act as B-cell mitogens and to augment the antibody response of B cells to sheep red blood cell (SRBC) challenge (adjuvanticity). In addn., they were tested for their ability to stimulate the natural killer (NK) cell response in murine in vitro cell assays. Certain of the compds. demonstrated in vivo activity when administered either i.v., s.c., or orally. Compds. bearing hydroxyalkyl, aminoalkyl, or substituted aminoalkyl substituents on this 7-position were weakly active. Oxo, thioxo, and seleno groups on C-8 of the guanosine ring all imparted strong activity, whereas other larger substituents did not (e.g., N:CN). A total of 80 compds. were prep'd. and evaluated for their immunostimulating activity. Within this group, compds. could be divided into those that were active in all three assays, those that displayed some measure of selectivity for the adjuvanticity assay, and those that preferentially activated NK responses. Because of its overall biol. profile and ease of synthesis, 7-allyl-8-oxoguanosine (loxoribine, RWJ-21757) was chosen for further development. It is among the most potent compds. evaluated in the three biol. assays.

L4 ANSWER 27 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:496031 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*119:96031\*\*\*

TITLE: An efficient and general synthesis of 5'-esters of 2',3'-didehydro-2',3'-dideoxynucleosides: a facile opening of 2',3'-orthoacetates of ribonucleosides followed by reductive elimination of the halo acetates

AUTHOR(S): Talekar, Ratnakar R.; Coe, Paul L.; Walker, Richard T.  
CORPORATE SOURCE: Sch. Chem., Univ. Birmingham, Birmingham, B15 2TT, UK  
SOURCE:

Synthesis (1993), (3), 303-6

CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 119:96031

GI

/ Structure 20 in file .gra /

AB A three-step reaction sequence starting from a ribonucleoside I [B = N<sup>4</sup>-acetylcytosinyl (C), uracyl (U), 6-oxopurinyl (I), adeninyl (A)] to give the corresponding 5'-O-acyl-2',3'-didehydro-2',3'-dideoxynucleoside II is described. The key intermediate is the bromoacetate III (B = C, I, A, R<sub>1</sub> = Br, R<sub>2</sub> = H, R<sub>3</sub> = OAc; B = U, R<sub>1</sub> = H, R<sub>2</sub> = OAc, R<sub>3</sub> = Br), made by reaction of the 2',3'-methoxyethylidene nucleoside IV with acetyl bromide. Reductive elimination of the bromoacetate using a zinc-copper couple

furnishes the desired compds. in good overall yield.

L4 ANSWER 28 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1993:409106 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*119:9106\*\*\*  
TITLE: Nucleoside derivatives and their production  
INVENTOR(S): Shiragami, Hiroshi; Uchida, Yumiko; Izawa, Kunisuke  
PATENT ASSIGNEE(S): Ajinomoto Co., Inc., Japan  
SOURCE: Eur. Pat. Appl., 16 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 519464	A1	19921223	EP 1992-110299	19920617
EP 519464	B1	19951220		
R: BE, DE, FR, GB, IT				
JP 05001092	A	19930108	JP 1991-245290	19910619
JP 3042073	B2	20000515		
US 5625057	A	19970429	US 1994-295478	19940825
PRIORITY APPLN. INFO.:			JP 1991-245290	A 19910619
			US 1992-899906	B1 19920617
OTHER SOURCE(S):	CASREACT 119:9106; MARPAT 119:9106			
GI				

/ Structure 21 in file .gra /

AB Nucleosides I [R = H, alkyl, acyl, silyl protective group; R1, R2 = alkyl; R3 = (un)protected OH, NH2; R4 = H, alkyl, halogen] were prep'd. as intermediates for the unsatd. nucleosides II. Thus, 5-methyluridine was treated with MeC(OMe)3 to give 95% I [R = H, R1, R2, R4 = Me, R3 = OH (III)] as a mixt. of diastereomers. Treatment of III with 1 equiv. AcBr and 3 equiv. HBr in AcOH gave 91.0% bromouridine IV. Treatment of IV with Zn-MeCN followed by aq. Na EDTA gave 80.5% II (R = H, R3 = OH, R4 = Me).

L4 ANSWER 29 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1992:470217 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*117:70217\*\*\*  
TITLE: A new synthesis of 2',3'-dideoxyinosine  
AUTHOR(S): Bhat, V.; Stocker, E.; Ugarkar, B. G.  
CORPORATE SOURCE: Pharm-Eco Lab., Inc., Simi Valley, CA, 93065, USA  
SOURCE: Synthetic Communications (1992), 22(10), 1481-6  
CODEN: SYNCV; ISSN: 0039-7911  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 117:70217  
AB The title compd. is prep'd. in excellent yield in 4 steps starting from inosine.

L4 ANSWER 30 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1992:470212 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*117:70212\*\*\*  
TITLE: A convenient method for the synthesis of 2',3'-didehydro-2',3'-dideoxy nucleosides  
AUTHOR(S): Dorland, Erwin; Serafinowski, Pawel

CORPORATE SOURCE: Drug Dev. Sect., Inst. Cancer Res., Sutton/Surrey, SM2  
SNG, UK  
SOURCE: Synthesis (1992), (5), 477-81  
CODEN: SYNTBF; ISSN: 0039-7881  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 117:70212  
GI

/ Structure 22 in file .gra /

AB 2',3'-Didehydro-2',3'-dideoxy nucleosides I ( B = R, R1, adenine) were prep'd. via a free radical .beta.-elimination of bromo and phenoxy(thiocarbonyl) leaving groups from appropriate phenoxy(thiocarbonyl)bromo derivs. II, adenosine, inosine, and tubercidin with Bu<sub>3</sub>SnH and subsequent deprotection of the resulting 5'-O-(2-acetoxyisobutyryl)-2',3'-didehydro-2',3'-dideoxy-nucleosides.

L4 ANSWER 31 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1991:583735 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*115:183735\*\*\*  
TITLE: Samarium(II) iodide-promoted deacetylation of O-acetyl sugar lactones. An easy access to deoxy sugar lactones  
AUTHOR(S): Inanaga, Junji; Katsuki, Junko; Yamaguchi, Masaru  
CORPORATE SOURCE: Inst. Mol. Sci., Okazaki, 444, Japan  
SOURCE: Chemistry Letters (1991), (6), 1025-6  
CODEN: CMLTAG; ISSN: 0366-7022  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 115:183735  
GI

/ Structure 23 in file .gra /

AB Selective deacetylation of O-acetyl sugar lactones, e.g. I (R = OAc), and O-acetyl-3-deoxy sugar lactones, e.g. I (R = H), was accomplished at room temp. with the aid of SmI<sub>2</sub> in the presence of Me<sub>3</sub>CCO<sub>2</sub>H or AcOH to give the .alpha.,.beta.-unsatd. lactones and satd. lactones (2,3-dideoxy sugar derivs.), resp.

L4 ANSWER 32 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1991:450188 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*115:50188\*\*\*  
TITLE: Novel method for the synthesis of 2',3'-unsaturated nucleosides from 2'(3')-acetoxy-3'(2')-halogeno derivatives by using sodium dithionite with viologen as a reductive elimination mediator  
AUTHOR(S): Amino, Yusuke; Iwagami, Hisao  
CORPORATE SOURCE: Cent. Res. Lab., Ajinomoto Co., Inc., Kawasaki, 210, Japan  
SOURCE: Chemical & Pharmaceutical Bulletin (1991), 39(3), 622-5  
CODEN: CPBTAL; ISSN: 0009-2363  
DOCUMENT TYPE: Journal  
LANGUAGE: English

OTHER SOURCE(S) :

CASREACT 115:50188

GI

/ Structure 24 in file .gra /

AB Reductive elimination of vicinal acetylated halohydrins with Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> as the reducing agent and viologen as the redn. mediator in a 2-phase water-org. system is described. 2',3'-Unsatd. nucleosides such as 1-(5-O-acetyl-2,3-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)adenine (I), -hypoxanthine, and -uracil were obtained from 2'(3')-acetoxy-3'(2')-halogeno derivs., e.g., II, in good yields by means of this procedure.

L4 ANSWER 33 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:194739 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*114:194739\*\*\*

TITLE: Electrochemical synthesis of 2',3'-dideoxy-2',3'-didehydrocytidine and 2',3'-dideoxycytidine

AUTHOR(S): Johansen, Oddvar; Holan, George; Marcuccio, Sebastian M.; Mau, Albert W. H.

CORPORATE SOURCE: Div. Chem. Polym., CSIRO, Clayton, 3168, Australia

SOURCE: Australian Journal of Chemistry (1991), 44(1), 37-41

CODEN: AJCHAS; ISSN: 0004-9425

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:194739

AB An improved electrochem. procedure for the synthesis of N4,05-diacetyl-2',3'-dideoxy-2',3'-didehydrocytidine (I) has been established. I was used as an intermediate in the syntheses of 2',3'-dideoxy-2'-3'-didehydrocytidine and 2',3'-dideoxycytidine.

L4 ANSWER 34 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:102667 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*114:102667\*\*\*

TITLE: The use of acetyl bromide for the multigram synthesis of the anti-HIV agent 2',3'-didehydro-2',3'-dideoxycytidine (d4C)

AUTHOR(S): Starrett, John E., Jr.; Tortolani, David R.; Baker, David C.; Omar, Mahmoud T.; Hebbler, Anna K.; Wos, John A.; Martin, John C.; Mansuri, Muzammil M.

CORPORATE SOURCE: Dep. Antiinfect. Chem., Bristol-Myers Squibb Co., Wallingford, CT, 06492, USA

SOURCE: Nucleosides & Nucleotides (1990), 9(7), 885-97

CODEN: NUNUD5; ISSN: 0732-8311

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 114:102667

GI

/ Structure 25 in file .gra /

AB Treatment of uridine with AcBr produced bromoacetate I, which was reduced with Zn/Cu to give unsatd. uridine II (R = Ac, X = O). Treatment of II (R = Bz, X = O) with Lawesson's reagent gave thioamide II (R = Bz, X = S) (III). Amination and deprotection of III with NH<sub>3</sub>/MeOH afforded title

d4C. This multigram scale process for the synthesis of d4C proceeded in 20% yield from uridine.

L4 ANSWER 35 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1990:532652 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*113:132652\*\*\*  
TITLE: Vitamin C and isovitamin C derived chemistry. 4.  
Synthesis of some novel furanone chirons  
AUTHOR(S): Vekemans, Jozef A. J. M.; Dapperens, Cornelis W. M.;  
Claessen, Ron; Koten, Annemiek M. J.; Godefroi, Erik  
F.; Chittenden, Gordon J. F.  
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Technology, Eindhoven, 5600  
MB, Neth.  
SOURCE: Journal of Organic Chemistry (1990), 55(19), 5336-44  
CODEN: JOCEAH; ISSN: 0022-3263  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 113:132652  
GI

/ Structure 26 in file .gra /

AB The utility of the vitamin C and isovitamin C derived dibromo diacetates I (R = H, R1 = OAc1, R = OAc, R1 = H) for prep. synthetically useful chirons is further examd. Methodologies for transforming the readily accessible compds. I into 3,6- and 5,6-anhydrohexono-1,4-lactones II (R2 = H, R3 = OH; R2 = OH, R3 = H) and III [(R),(S)-oxirane] are presented. Elaboration of the lactone epoxides III and IV provided optically pure (S,S)-, meso-, and (R,R)-4,4'-bis-.gamma.-butyrolactones V (S,S, meso) and VI. The difference in reactivity between some isomeric intermediates was related to the spatial arrangement at the reactive sites.

L4 ANSWER 36 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1990:441211 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*113:41211\*\*\*  
TITLE: Preparation of pyrrolo[2,3-d]pyrimidine nucleosides as antiviral agents  
INVENTOR(S): Townsend, Leroy B.; Drach, John C.; Krawczyk, Steven H.  
PATENT ASSIGNEE(S): University of Michigan, USA  
SOURCE: U.S., 14 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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US 4892865	A	19900109	US 1987-127487	19871201
PRIORITY APPLN. INFO.:			US 1987-127487	19871201
OTHER SOURCE(S):	CASREACT 113:41211; MARPAT 113:41211			
GI				

/ Structure 27 in file .gra /

AB The title compds. [I; R1 = NH2, OH; R2 = H, cyano, CO2H, CONH2, C(S)NH2, etc.; R3 = 2',3'-dideoxy-2',3'-didehydro-.beta.-D-ribofuranosyl,

2',3'-dideoxyribofuranosyl], inhibitors of herpes virus and cytomegalovirus, were prep'd. Tubercidin was 3'-brominated-2',5'-di-O-acetylated with AcOCMe<sub>2</sub>COBr in MeOH-MeCN contg. Ac2O and pyridine and the product treated with Zn-Cu in DMF to give, after deacetylation, 2',3'-dideoxy-2',3'-didehydrotubercidin, whose IC<sub>50</sub> for cytomegalovirus was >100 .mu.M. The cytotoxicity of I was also tested.

L4 ANSWER 37 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1990:441201 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*113:41201\*\*\*  
TITLE: Synthesis and anti-HIV evaluation of 2',3'-dideoxyribo-5-chloropyrimidine analogs: reduced toxicity of 5-chlorinated 2',3'-dideoxynucleosides  
AUTHOR(S): Van Aerschot, Arthur; Everaert, Dirk; Balzarini, Jan; Augustyns, Koen; Jie, Liu; Janssen, Gerard; Peeters, Oswald; Blaton, Norbert; De Ranter, Camiel; et al.  
CORPORATE SOURCE: Rega Inst. Med. Res., Kathol. Univ. Leuven, Louvain, B-3000, Belg.  
SOURCE: Journal of Medicinal Chemistry (1990), 33(6), 1833-9  
CODEN: JMCMAR; ISSN: 0022-2623  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 113:41201  
GI

/ Structure 28 in file .gra /

AB In view of the selective anti-HIV activity of 2',3'-dideoxy-3'-fluoro-5-chlorouridine (I), a series of eight 2',3'-dideoxy-5-chloropyrimidines were synthesized and evaluated for their inhibitory activity against human immunodeficiency virus type 1 (HIV-1) replication in MT-4 cells. A marked improvement in selectivity was noted for the 5-chlorouracil derivs. of 2,3-dideoxyribofuranose, 3-azido-2,3-dideoxyribofuranose, and 3-fluoro-2,3-dideoxyribofuranose, mainly due to decreased toxicity of the compds. for the host cells. While chlorination of 2',3'-dideoxycytidine removed the anti-HIV activity, introduction of Cl at C(5) of 3'-fluoro-, 3'-azido- or 2',3'-didehydro-2',3'-dideoxycytidine led to reduced cytotoxicity with only slightly reduced anti-HIV activity. X-ray anal. revealed no close resemblance of I to 3'-azido-3'-deoxythymidine (AZT).

L4 ANSWER 38 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1990:119355 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*112:119355\*\*\*  
TITLE: Preparation of 2',3'-dideoxy-2',3'-didehydro-pyrimidine,-azapyrimidine, or -deazapyrimidine nucleosides as antiviral agents against human immunodeficiency viruses (HIV)  
INVENTOR(S): Starrett, John E., Jr.; Mansuri, Muzammil M.; Martin, John C.; Fuller, Carl E.; Howell, Henry G.  
PATENT ASSIGNEE(S): Bristol-Myers Co., USA  
SOURCE: Eur. Pat. Appl., 22 pp.  
CODEN: EPXXDW  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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EP 334368	A2	19890927	EP 1989-105269	19890323
EP 334368	A3	19911227		
R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE				
US 4904770	A	19900227	US 1988-173473	19880324
CA 1339448	C	19970909	CA 1989-593738	19890315
NO 8901208	A	19890925	NO 1989-1208	19890320
NO 171367	B	19921123		
FI 8901338	A	19890925	FI 1989-1338	19890321
FI 93111	B	19941115		
FI 93111	C	19950227		
IL 105572	A	19940412	IL 1989-105572	19890321
IL 105573	A	19940412	IL 1989-105573	19890321
IL 105571	A	19940530	IL 1989-105571	19890321
IL 89693	A	19940826	IL 1989-89693	19890321
IL 105570	A	19940826	IL 1989-105570	19890321
DK 8901464	A	19890925	DK 1989-1464	19890322
ZA 8902166	A	19920226	ZA 1989-2166	19890322
AU 8931673	A	19890928	AU 1989-31673	19890323
AU 622439	B2	19920409		
JP 02149595	A	19900608	JP 1989-71592	19890323
KR 140889	B1	19980615	KR 1989-3629	19890323
US 5130421	A	19920714	US 1991-697512	19910429
NO 9103456	A	19890925	NO 1991-3456	19910903
NO 172345	B	19930329		
NO 172345	C	19930707		
NO 9103457	A	19890925	NO 1991-3457	19910903
NO 171314	B	19921116		
NO 171314	C	19930224		
NO 9103458	A	19890925	NO 1991-3458	19910903
NO 171315	B	19921116		
NO 171315	C	19930224		
NO 9103459	A	19890925	NO 1991-3459	19910903
NO 171316	B	19921116		
NO 171316	C	19930224		
US 5212294	A	19930518	US 1992-860938	19920331
CA 1339861	C	19980512	CA 1993-616776	19931206
FI 9405698	A	19941202	FI 1994-5698	19941202
FI 9405699	A	19941202	FI 1994-5699	19941202
FI 9405700	A	19941202	FI 1994-5700	19941202
CA 1339483	C	19970930	CA 1996-617047	19960321
KR 142109	B1	19980701	KR 1997-54314	19971023
KR 142110	B1	19980701	KR 1997-54315	19971023
PRIORITY APPLN. INFO.:			US 1988-173473	A 19880324
			CA 1989-593738	A3 19890315
			NO 1989-1208	A1 19890320
			IL 1989-89693	A3 19890321
			KR 1989-3629	A 19890323
			US 1989-441023	B1 19891124
			US 1991-697512	A3 19910429
			FI 1994-103	A 19940110

OTHER SOURCE(S): CASREACT 112:119355; MARPAT 112:119355

GI

/ Structure 29 in file .gra /

AB 2',3'-Dideoxy-2',3'-didehydrornucleosides [I; X = N, CH; Y = CR5; N; Z = CH, N; R4 = OH, NH2; R5 = H, (halo-substituted) CnH2nA or (CH2)mCH:CHA; m

= 0-3; n = 1-3; A = H, F, Cl, Br, iodo], useful as antiviral agents, esp. against HIV, are prep'd. in high yields and on a relatively large scale by subjecting various intermediates II-IV, V (R = Br, R1 = isobutyryloxy; or R = isobutyryloxy, R1 = Br) and VI to elimination reactions by treatment of (1) II with a strong base (e.g. tert-BuOK), (2) II with an org. acid in Ac2O at 120-160.degree. for 4-8 h followed by 5-O-deacetylation, (3) IV with P(OEt)3 in a polar solvent at 140-175.degree. 0.5-4 h, (4) V with Zn/Cu in an aprotic solvent, and (5) VI with a nonnucleophilic base (e.g. Bu4NF) or nucleophilic base (e.g. tert-BuOK and KOH). Thus, mesylation of thymidine with MeSO2Cl in pyridine at 0-5.degree. gave 81% 3',5'-di-O-(methanesulfonyl)thymidine which was added portionwise to a stirred soln. of aq. NaOH and then refluxed 2 h to give 74% 1-(3,5-anhydro-2-deoxy-.beta.-D-threo-pentofuranosyl)thymine. To a stirred soln. of 90.0 g of the latter octane was added 97% tert-BuOK (74 g) portionwise over 25 min at 18-22.degree. in an ice bath. The mixt. was stirred 1 h to give 57% 1-(2,3-dideoxy-.beta.-glycero-pent-2-enofuranosyl)thymine (VII). VII showed an IC50 of 0.33 .mu.M against HIV in CEM cells vs. 0.45 for AZT.

L4 ANSWER 39 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1989:554286 CAPLUS <<LOGINID::20071011>>  
 DOCUMENT NUMBER: \*\*\*111:154286\*\*\*  
 TITLE: Preparation of 1-(2,3-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)thymine (d4T) and 2',3'-dideoxyadenosine (ddA): general methods for the synthesis of 2',3'-olefinic and 2',3'-dideoxy nucleoside analogs active against HIV  
 AUTHOR(S): Mansuri, Muzammil M.; Starrett, John E., Jr.; Wos, John A.; Tortolani, David R.; Brodfuehrer, Paul R.; Howell, Henry G.; Martin, John C.  
 CORPORATE SOURCE: Pharm. Res. Dev. Div., Bristol-Myers, Wallingford, CT, 06492-7660, USA  
 SOURCE: Journal of Organic Chemistry (1989), 54(20), 4780-5  
 CODEN: JOCEAH; ISSN: 0022-3263  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 111:154286  
 GI

/ Structure 30 in file .gra /

AB Methods for the prepn. of the 2',3'-unsatd. thymidine and cytidine analogs (I; R = Me, R1 = OH; R = H, R1 = NH2), 2',3'-dideoxycytidine and 2',3'-dideoxyadenosine, which are active in vitro against HIV, are reported. The methods used were the Corey-Winter reaction involving the fragmentation of a cyclic thionocarbonate II, olefin formation from 2',3'-O-alkoxymethylidene cyclic ortho esters, and the reductive elimination of the 2',3' halo acetates, e.g., III [R2 = COC(OAc)Me2, R3 = H, Me; R1 = Ac, R3 = Me]. Of these 3 methods, the last was the most versatile, since the intermediates III or the trans-3'(2')-bromo-2'(3')-O-acetyl-3'(2')-deoxyarabinosylpurines are readily transformed to the corresponding olefins. As an example of the prepn. of a satd. 2',3'-dideoxy analog, 2',3'-dideoxyadenosine was obtained by catalytic redn. of the corresponding olefinic nucleoside.

L4 ANSWER 40 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1989:439794 CAPLUS <<LOGINID::20071011>>  
 DOCUMENT NUMBER: \*\*\*111:39794\*\*\*

TITLE: 2',3'-Dideoxyadenosine analogs of the nucleoside antibiotics tubercidin, toyocamycin and sangivamycin  
AUTHOR(S): Krawczyk, Steven H.; Townsend, Leroy B.  
CORPORATE SOURCE: Coll. Pharm., Univ. Michigan, Ann Arbor, MI,  
48109-1065, USA  
SOURCE: Nucleosides & Nucleotides (1989), 8(1), 97-115  
CODEN: NUNUD5; ISSN: 0732-8311  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 111:39794  
GI

/ Structure 31 in file .gra /

AB Dideoxynucleosides I (R1 = H, cyano, CONH2) were prep'd. Toyocamycin was treated with Me2C(OAc)COBr, MeOH, and Ac2O to give bromodeoxy compd. II, and II was subjected to sequential elimination reaction with Zn-Cu, deacetylation, and hydrogenation to give I (R1 = cyano).

L4 ANSWER 41 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1988:75761 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*108:75761\*\*\*  
TITLE: Vitamin C and isovitamin C derived chemistry. 3.  
Chiral butenolides via efficient 2,3-didehydroxylations of L-gulono-, D-mannono-, and D-ribono-1,4-lactones  
AUTHOR(S): Vekemans, Jozef A. J. M.; Franken, Gabriel A. M.; Dapperens, Cornelis W. M.; Godefroi, Erik F.; Chittenden, Gordon J. F.  
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Technol., Eindhoven, 5600 MB, Neth.  
SOURCE: Journal of Organic Chemistry (1988), 53(3), 627-33  
CODEN: JOCEAH; ISSN: 0022-3263  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 108:75761  
GI

/ Structure 32 in file .gra /

AB Efficient, operationally simple procedures for prep'g. the chiral butenolides I (R = H, R1 = R2 = OH; R = R2 = OH, R1 = H; R = H, R1 = OAc, R2 = Br; R = OAc, R1 = H, R2 = Br; R = H, R1 = OH, R2 = Br; R = OH, R1 = H, R2 = Br; R = H, R1R2 = O; RR2 = O, R1 = H) from com. L-ascorbic acid and D-isoascorbic acid are described. The concept centers on the novel NaHSO3-induced regiospecific trans-.beta.-bromo-acetoxy elimination of the readily accessible O-acetylated bromodeoxyaleno-1,4-lactones II (R = H, R1 = OAc; R = OAc, R1 = H) to I (R2 = Br). These, on deacetylation and treatment of the resulting bromohydrins with Ag2O, afford the enantiomerically pure epoxides I (R = H, R1R2 = O; RR2 = O, R1 = H) and thence, in boiling water, the corresponding diols I (R = H, R1 = R2 = OH; R = R2 = OH, R1 = H). Lactone III was also prep'd. in 48% overall yield from D-ribono-1,4-lactone.

L4 ANSWER 42 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1988:56502 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*108:56502\*\*\*  
TITLE: An efficient synthesis of (S)-5-hydroxymethyl-2(5H)-furanone  
AUTHOR(S): Vekemans, Jozef A. J. M.; Franken, Gabriel A. M.; Chittenden, Gordon J. F.; Godefroi, Erik F.  
CORPORATE SOURCE: Dep. Chem. Technol., Univ. Technol., Eindhoven, 5600 MB, Neth.  
SOURCE: Tetrahedron Letters (1987), 28(20), 2299-300  
CODEN: TELEAY; ISSN: 0040-4039  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 108:56502  
GI

/ Structure 33 in file .gra /

AB A three step synthesis of the title compd. [I; R = OH (II)] from D-ribono-1,4-lactone in 48% yield is described. The method centers on a novel NaHSO<sub>3</sub>-induced trans-Br-OAc elimination of the readily prep'd. bromoacetate mixt. III (R<sub>1</sub> = OAc, Br) to the corresponding butenolides I (R = OAc, Br), which (R = OAc) on hydrolysis and purifn., yields pure II.

L4 ANSWER 43 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1987:196718 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*106:196718\*\*\*  
TITLE: The reaction of 9-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)adenine derivatives with arene- and alkanesulfenyl chlorides. An unusual ring opening reaction of thiranium ions  
AUTHOR(S): Welch, C. J.; Bazin, H.; Chattopadhyaya, J.  
CORPORATE SOURCE: Biomed. Cent., Uppsala Univ., Uppsala, S-751 23, Swed.  
SOURCE: Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (1986), B40(5), 343-57  
CODEN: ACBOCV; ISSN: 0302-4369  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 106:196718  
GI

/ Structure 34 in file .gra /

AB A series of arenesulfenyl chlorides and methanesulfenyl chloride were treated in pyridine soln. with the title adenine deriv. I. In each case, the relative abundance of isomeric .beta.-chloroarene/alkane sulfides was estd. and used to assess the relative thermodn. stabilities of the lyxo and ribo thiiranium ion intermediates and their steric susceptibilities to attack by a nucleophile (Cl<sup>-</sup>). Subsequently, the .beta.-chloroarene/alkane sulfides II [R = Cl, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Q (Q = PhS, p-MeC<sub>6</sub>H<sub>4</sub>S, o-MeC<sub>6</sub>H<sub>4</sub>S, p-ClC<sub>6</sub>H<sub>4</sub>S, MeS); R = R<sub>3</sub> = H, R<sub>1</sub> = Cl, R<sub>2</sub> = Q; R = Q, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Cl; R = R<sub>3</sub> = H, R<sub>1</sub> = Q, R<sub>2</sub> = Cl], upon alk. treatment, underwent an unprecedented ylide-mediated .beta.-elimination of the intermediary lyxo and ribo thiiranium ions, to give only 2'-ene-thiol ethers III (R<sub>4</sub> = Q).

L4 ANSWER 44 OF 44 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1985:422870 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*103:22870\*\*\*  
TITLE: Elimination reaction of aldehydo-D-glucurono-6,3-

AUTHOR(S): Iactone derivatives  
CORPORATE SOURCE: Itoh, Hiroshi; Aoki, Koichi; Matsumoto, Takahiro  
Noguchi Inst., Tokyo, 173, Japan  
SOURCE: Bulletin of the Chemical Society of Japan (1985),  
58(2), 777-8  
CODEN: BCSJA8; ISSN: 0009-2673  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
OTHER SOURCE(S): CASREACT 103:22870  
AB D-Glucurono-6,3-lactone derivs. are converted to butenolide or  
dihydro-2H-pyran derivs. by treatment with Et3N.

=> file stng

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	124.99	239.20
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-34.32	-34.32

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FULL ESTIMATED COST	0.12	239.32
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-34.32

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FILE LAST UPDATED: 10 Oct 2007 (20071010/ED)

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(FILE 'HOME' ENTERED AT 15:31:21 ON 11 OCT 2007)

FILE 'CASREACT' ENTERED AT 15:31:37 ON 11 OCT 2007

L1 STRUCTURE UPLOADED

L2 4 S L1

L3 44 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:32:41 ON 11 OCT 2007

L4 44 S L3

FILE 'STNGUIDE' ENTERED AT 15:33:12 ON 11 OCT 2007

FILE 'CAPLUS' ENTERED AT 15:34:30 ON 11 OCT 2007

=> s 14 and zinc

641794 ZINC

139 ZINCS

641819 ZINC

(ZINC OR ZINCS)

L5 5 L4 AND ZINC

=> d 15 1-5 ibib abs

L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1094206 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*143:347399\*\*\*

TITLE: Method for preparing 2',3'-dideoxycytidine

INVENTOR(S): Lu, Jinkang; Wang, Xinhua

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8 pp.

CODEN: CNXKEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
CN 1563030	A	20050112	CN 2004-10014350	20040315
PRIORITY APPLN. INFO.:			CN 2004-10014350	20040315

OTHER SOURCE(S): CASREACT 143:347399

AB The title method comprises allowing cytidine to react with acetic anhydride to get 4-N-acetylcytidine, reacting 4-N-acetylcytidine with a satd. acetic acid soln. of hydrogen bromide with acetic anhydride as catalyst to get a bromide mixt.; reacting to get 4-N-acetyl-2',3'-didehydro-2',3'-dideoxycytidine-5'-acetate with \*\*\*zinc\*\*\* copper couple as catalyst; hydrogenating in the presence of Pd/C to get 4-N-acetyl-2',3'-dideoxyguanosine-5'-acetate; and reacting at the presence of methanol and triethylamine to get 2',3'-dideoxycytidine. The invention has the advantages of simple technique, easy operation, easily-accessible raw material, and high yield exceeding 90%.

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:123466 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*138:137526\*\*\*

TITLE: Preparation of 2',3'-didehydro-3'-deoxythymidine

INVENTOR(S): Yao, Qizheng; Lu, Gang

PATENT ASSIGNEE(S): China Pharmacy Univ., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 12 pp.

CODEN: CNXKEV

DOCUMENT TYPE:

Patent

LANGUAGE:

Chinese

FAMILY ACC. NUM. COUNT:

1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1324800	A	20011205	CN 2001-113661	20010601
			CN 2001-113661	20010601

PRIORITY APPLN. INFO.: CASREACT 138:137526; MARPAT 138:137526

AB Stavudine (2',3'-didehydro-3'-deoxythymidine) as antiviral agent is synthesized by dehydrating 5-methyluridine with di-C1- 4 alkyl or di-Ph carbonate (at a molar ratio of 1.1-1.5) in anhyd. polar solvent (such as DMF or DMA) in the presence of base (such as NaHCO<sub>3</sub> or KHCO<sub>3</sub>) at 90-150.degree. to obtain 2,2'-anhydro-5-methyluridine; acylating and halogenating with C1- 6 acyl halide (or org. anhydride-org. acid-NaBr and/or H<sub>2</sub>SO<sub>4</sub>, or org. anhydride-pyridinium bromide perbromide) in polar solvent (such as acetonitrile, DMF, or Et acetate) at 50-75.degree. to obtain 2'-halo-3',5'-O-diacylthymidine (halo = Cl, Br, or I); reductive eliminating with metal reductant (such as Zn or Zn-Cu) in methanol or ethanol and/or Et acetate in the presence of acid (such as acetic acid or propanoic acid) at 5-35.degree.; and hydrolyzing with base (such as Na methoxide or NH<sub>3</sub>) in methanol or ethanol and/or dioxane.

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:762991 CAPLUS &lt;&lt;LOGINID::20071011&gt;&gt;

DOCUMENT NUMBER: \*\*\*135:304107\*\*\*

TITLE: Process for preparing 5'-acetylstavudine by the reductive elimination reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine

INVENTOR(S): Bertolini, Giorgio; Frigerio, Marco; Velati, Maurizio; Petrucciani, Luigi

PATENT ASSIGNEE(S): Clariant Life Science Molecules, Italy

SOURCE: PCT Int. Appl., 12 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001077103	A1	20011018	WO 2001-IB588	20010410
W: BR, HU, JP, KR, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
IT 2000MI0810	A1	20011012	IT 2000-MI810	20000412
IT 1318463	B1	20030825		
EP 1274704	A1	20030115	EP 2001-917385	20010410
EP 1274704	B1	20040114		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
BR 2001009965	A	20030527	BR 2001-9965	20010410
HU 200300259	A2	20030628	HU 2003-259	20010410
JP 2003530394	T	20031014	JP 2001-575576	20010410
AT 257835	T	20040115	AT 2001-917385	20010410
ES 2213109	T3	20040816	ES 2001-1917385	20010410
US 2001039342	A1	20020226	US 2001-834028	20010412
MX 2002PA10072	A	20030310	MX 2002-PA10072	20021011
PRIORITY APPLN. INFO.:			IT 2000-MI810	A 20000412
			WO 2001-IB588	W 20010410

OTHER SOURCE(S): CASREACT 135:304107

AB 5'-Acetyl stavudine is prepd. in high yield and selectivity by the reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine in the presence of \*\*\*zinc\*\*\* as reducing agent combined with an activating agent which is an ammonium salt (e.g., triethylammonium hydrochloride) and/or a phosphonium salt in a dipolar aprotic solvent (e.g., DMF).

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:496031 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*119:96031\*\*\*

TITLE: An efficient and general synthesis of 5'-esters of 2',3'-didehydro-2',3'-dideoxynucleosides: a facile opening of 2',3'-orthoacetates of ribonucleosides followed by reductive elimination of the halo acetates

AUTHOR(S): Talekar, Ratnakar R.; Coe, Paul L.; Walker, Richard T.  
CORPORATE SOURCE: Sch. Chem., Univ. Birmingham, Birmingham, B15 2TT, UK

SOURCE: Synthesis (1993), (3), 303-6  
CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 119:96031

GI

/ Structure 35 in file .gra /

AB A three-step reaction sequence starting from a ribonucleoside I [B = N4-acetylcytosinyl (C), uracyl (U), 6-oxopurinyl (I), adeninyl (A)] to give the corresponding 5'-O-acyl-2',3'-didehydro-2',3'-dideoxynucleoside II is described. The key intermediate is the bromoacetate III ( B = C, I, A, R1 = Br, R2 = H, R3 = OAc; B = U, R1 = H, R2 = OAc, R3 = Br), made by reaction of the 2',3'-methoxyethylidene nucleoside IV with acetyl bromide. Reductive elimination of the bromoacetate using a \*\*\*zinc\*\*\* -copper couple furnishes the desired compds. in good overall yield.

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:196718 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*106:196718\*\*\*

TITLE: The reaction of 9-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)adenine derivatives with arene- and alkanesulfenyl chlorides. An unusual ring opening reaction of thiranium ions

AUTHOR(S): Welch, C. J.; Bazin, H.; Chattopadhyaya, J.  
CORPORATE SOURCE: Biomed. Cent., Uppsala Univ., Uppsala, S-751 23, Swed.  
SOURCE: Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (1986), B40(5), 343-57  
CODEN: ACBOCV; ISSN: 0302-4369

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 106:196718

GI

/ Structure 36 in file .gra /

AB A series of arenesulfenyl chlorides and methanesulfenyl chloride were treated in pyridine soln. with the title adenine deriv. I. In each case, the relative abundance of isomeric .beta.-chloroarene/alkane sulfides was estd. and used to assess the relative thermodn. stabilities of the lyxo and ribo thiiranium ion intermediates and their steric susceptibilities to attack by a nucleophile (Cl<sup>-</sup>). Subsequently, the .beta.-chloroarene/alkane sulfides II [R = Cl, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Q (Q = PhS, p-MeC<sub>6</sub>H<sub>4</sub>S, o-MeC<sub>6</sub>H<sub>4</sub>S, p-ClC<sub>6</sub>H<sub>4</sub>S, MeS); R = R<sub>3</sub> = H, R<sub>1</sub> = Cl, R<sub>2</sub> = Q; R = Q, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Cl; R = R<sub>3</sub> = H, R<sub>1</sub> = Q, R<sub>2</sub> = Cl], upon alk. treatment, underwent an unprecedented ylide-mediated .beta.-elimination of the intermediary lyxo and ribo thiiranium ions, to give only 2'-ene-thiol ethers III (R<sub>4</sub> = Q).

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FILE 'CASREACT' ENTERED AT 15:31:37 ON 11 OCT 2007  
L1 STRUCTURE uploaded  
L2 4 S L1  
L3 44 S L1 FULL  
  
FILE 'CAPLUS' ENTERED AT 15:32:41 ON 11 OCT 2007  
L4 44 S L3  
  
FILE 'STNGUIDE' ENTERED AT 15:33:12 ON 11 OCT 2007  
  
FILE 'CAPLUS' ENTERED AT 15:34:30 ON 11 OCT 2007  
L5 5 S L4 AND ZINC  
  
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L5 ANSWER 1 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:1094206 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER: \*\*\*143:347399\*\*\*  
TITLE: Method for preparing 2',3'-dideoxycytidine  
INVENTOR(S): Lu, Jinkang; Wang, Xinhua  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shengqing Gongkai Shuomingshu, 8 pp.  
CODEN: CNXXEV

DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1563030	A	20050112	CN 2004-10014350	20040315
			CN 2004-10014350	20040315

PRIORITY APPLN. INFO.: CASREACT 143:347399

AN 2005:1094206 CAPLUS <<LOGINID::20071011>>

DN \*\*\*143:347399\*\*\*

AB . . . acid soln. of hydrogen bromide with acetic anhydride as catalyst to get a bromide mixt.; reacting to get 4-N-acetyl-2',3'-didehydro-2',3'-dideoxycytidine-5'-acetate with \*\*\*zinc\*\*\* copper couple as catalyst; hydrogenating in the presence of Pd/C to get 4-N-acetyl-2',3'-dideoxyguanosine-5'-acetate; and reacting at the presence of methanol. . .

L5 ANSWER 2 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2003:123466 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*138:137526\*\*\*

TITLE: Preparation of 2',3'-didehydro-3'-deoxythymidine

INVENTOR(S): Yao, Qizheng; Lu, Gang

PATENT ASSIGNEE(S): China Pharmacy Univ., Peop. Rep. China

SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 12 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1324800	A	20011205	CN 2001-113661	20010601
			CN 2001-113661	20010601

PRIORITY APPLN. INFO.: CASREACT 138:137526; MARPAT 138:137526

AN 2003:123466 CAPLUS <<LOGINID::20071011>>

DN \*\*\*138:137526\*\*\*

IT 598-22-1, Propionyl bromide 1463-10-1 7440-66-6, \*\*\*Zinc\*\*\* , reactions 12621-78-2

RL: RCT (Reactant); RACT (Reactant or reagent)  
(prep. of 2',3'-didehydro-3'-deoxythymidine)

L5 ANSWER 3 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:762991 CAPLUS <<LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*135:304107\*\*\*

TITLE: Process for preparing 5'-acetylstavudine by the reductive elimination reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine

INVENTOR(S): Bertolini, Giorgio; Frigerio, Marco; Velati, Maurizio; Petrucciani, Luigi

PATENT ASSIGNEE(S): Clariant Life Science Molecules, Italy

SOURCE: PCT Int. Appl., 12 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 2001077103	A1	20011018	WO 2001-IB588	20010410
W: BR, HU, JP, KR, MX				
RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR				
IT 2000MI0810	A1	20011012	IT 2000-MI810	20000412
IT 1318463	B1	20030825		
EP 1274704	A1	20030115	EP 2001-917385	20010410
EP 1274704	B1	20040114		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, LI, LU, NL, SE, MC, PT, IE, FI, CY, TR				
BR 2001009965	A	20030527	BR 2001-9965	20010410
HU 200300259	A2	20030628	HU 2003-259	20010410
JP 2003530394	T	20031014	JP 2001-575576	20010410
AT 257835	T	20040115	AT 2001-917385	20010410
ES 2213109	T3	20040816	ES 2001-1917385	20010410
US 2001039342	A1	20020226	US 2001-834028	20010412
MX 2002PA10072	A	20030310	MX 2002-PA10072	20021011
PRIORITY APPLN. INFO.:			IT 2000-MI810	A 20000412
			WO 2001-IB588	W 20010410

OTHER SOURCE(S): CASREACT 135:304107

REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

AN 2001:762991 CAPLUS <>LOGINID::20071011>>

DN \*\*\*135:304107\*\*\*

AB 5'-Acetylstavudine is prep'd. in high yield and selectivity by the reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine in the presence of \*\*\*zinc\*\*\* as reducing agent combined with an activating agent which is an ammonium salt (e.g., triethylammonium hydrochloride) and/or a phosphonium salt. . .

IT 7440-66-6, \*\*\*Zinc\*\*\* , reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(powder; process for prepg. 5'-acetylstavudine by the reductive elimination reaction of 2'-deoxy-2'-bromo-3',5'-diacetyl-5-methyluridine using)

L5 ANSWER 4 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:496031 CAPLUS <>LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*119:96031\*\*\*

TITLE: An efficient and general synthesis of 5'-esters of 2',3'-didehydro-2',3'-dideoxynucleosides: a facile opening of 2',3'-orthoacetates of ribonucleosides followed by reductive elimination of the halo acetates

AUTHOR(S): Talekar, Ratnakar R.; Coe, Paul L.; Walker, Richard T.

CORPORATE SOURCE: Sch. Chem., Univ. Birmingham, Birmingham, B15 2TT, UK

SOURCE: Synthesis (1993), (3), 303-6

CODEN: SYNTBF; ISSN: 0039-7881

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 119:96031

AN 1993:496031 CAPLUS <>LOGINID::20071011>>

DN \*\*\*119:96031\*\*\*

AB . . . = Br), made by reaction of the 2',3'-methoxyethylidene nucleoside IV with acetyl bromide. Reductive elimination of the bromoacetate using a \*\*\*zinc\*\*\* -copper couple furnishes the desired compds. in good overall yield.

ST didehydropidideoxynucleoside; nucleoside didehydropidideoxy; ribonucleoside reaction orthoformate; methoxyethylidene nucleoside reaction acetyl bromide; bromodeoxy nucleoside redn \*\*\*zinc\*\*\* copper couple

L5 ANSWER 5 OF 5 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:196718 CAPLUS <>LOGINID::20071011>>

DOCUMENT NUMBER: \*\*\*106:196718\*\*\*

TITLE: The reaction of 9-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)adenine derivatives with arene- and alkanesulfenyl chlorides. An unusual ring opening reaction of thiranium ions

AUTHOR(S): Welch, C. J.; Bazin, H.; Chattopadhyaya, J.

CORPORATE SOURCE: Biomed. Cent., Uppsala Univ., Uppsala, S-751 23, Swed.

SOURCE: Acta Chemica Scandinavica, Series B: Organic Chemistry and Biochemistry (1986), B40(5), 343-57  
CODEN: ACBOCV; ISSN: 0302-4369

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 106:196718

AN 1987:196718 CAPLUS <<LOGINID::20071011>>

DN \*\*\*106:196718\*\*\*

IT 64-17-5P, preparation 64-19-7P, preparation 67-56-1P, preparation  
98-88-4P 108-24-7P 109-86-4P, 2-Methoxyethanol 109-99-9P,  
preparation 110-86-1P, Pyridine, preparation 124-41-4P 127-09-3P  
7440-02-0P, Nickel, preparation 7440-66-6P, \*\*\*Zinc\*\*\*, preparation  
7664-41-7P, preparation 7722-64-7P 7732-18-5P, Water, preparation  
104525-44-2P 104525-45-3P 104525-46-4P 104525-47-5P 104525-48-6P  
104525-49-7P 104525-50-0P 104525-51-1P 108182-98-5P 108182-99-6P  
108183-00-2P 108183-01-3P 108183-07-9P 108183-09-1P 108183-10-4P  
108183-11-5P 108183-12-6P 108183-13-7P 108183-14-8P 108183-20-6P  
108183-21-7P 108183-22-8P 108183-23-9P 108194-70-3P 108194-71-4P  
108194-72-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prep. of)

=> file stng

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	268.75

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-40.56

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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.06	268.81

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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L1                   STRUCTURE UPLOADED  
L2                  4 S L1  
L3                  44 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:32:41 ON 11 OCT 2007

L4                  44 S L3

FILE 'STNGUIDE' ENTERED AT 15:33:12 ON 11 OCT 2007

L5                  FILE 'CAPLUS' ENTERED AT 15:34:30 ON 11 OCT 2007  
                    5 S L4 AND ZINC

FILE 'STNGUIDE' ENTERED AT 15:34:52 ON 11 OCT 2007

FILE 'CAPLUS' ENTERED AT 15:35:17 ON 11 OCT 2007

FILE 'STNGUIDE' ENTERED AT 15:35:17 ON 11 OCT 2007

FILE 'STNGUIDE' ENTERED AT 15:35:22 ON 11 OCT 2007

FILE 'CAPLUS' ENTERED AT 15:36:05 ON 11 OCT 2007

=> s 15 and sulfide  
332880 SULFIDE  
87975 SULFIDES  
366071 SULFIDE  
                  (SULFIDE OR SULFIDES)  
L6                  1 L5 AND SULFIDE

=> d 16 ibib kwic

L6 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER:       1987:196718 CAPLUS <<LOGINID::20071011>>  
DOCUMENT NUMBER:        \*\*\*106:196718\*\*\*  
TITLE:                  The reaction of 9-(2',3'-dideoxy-.beta.-D-glycero-pent-2-enofuranosyl)adenine derivatives with arene- and alkanesulfenyl chlorides. An unusual ring opening reaction of thiranium ions  
AUTHOR(S):             Welch, C. J.; Bazin, H.; Chattopadhyaya, J.  
CORPORATE SOURCE:      Biomed. Cent., Uppsala Univ., Uppsala, S-751 23, Swed.  
SOURCE:                Acta Chemica Scandinavica, Series B: Organic

DOCUMENT TYPE:

Journal

LANGUAGE:

English

OTHER SOURCE(S): CASREACT 106:196718

AN 1987:196718 CAPLUS <<LOGINID::20071011>>

DN \*\*\*106:196718\*\*\*

AB . . . were treated in pyridine soln. with the title adenine deriv. I. In each case, the relative abundance of isomeric .beta.-chloroarene/alkane \*\*\*sulfides\*\*\* was estd. and used to assess the relative thermodn. stabilities of the lyxo and ribo thiiranium ion intermediates and their steric susceptibilities to attack by a nucleophile (Cl<sup>-</sup>). Subsequently, the .beta.-chloroarene/alkane \*\*\*sulfides\*\*\* II [R = Cl, R<sub>1</sub> = R<sub>2</sub> = H, R<sub>3</sub> = Q (Q = PhS, p-MeC<sub>6</sub>H<sub>4</sub>S, o-MeC<sub>6</sub>H<sub>4</sub>S, p-ClC<sub>6</sub>H<sub>4</sub>S, MeS); R. . .].

IT 64-17-5P, preparation 64-19-7P, preparation 67-56-1P, preparation 98-88-4P 108-24-7P 109-86-4P, 2-Methoxyethanol 109-99-9P, preparation 110-86-1P, Pyridine, preparation 124-41-4P 127-09-3P 7440-02-0P, Nickel, preparation 7440-66-6P, \*\*\*Zinc\*\*\*, preparation 7664-41-7P, preparation 7722-64-7P 7732-18-5P, Water, preparation 104525-44-2P 104525-45-3P 104525-46-4P 104525-47-5P 104525-48-6P 104525-49-7P 104525-50-0P 104525-51-1P 108182-98-5P 108182-99-6P 108183-00-2P 108183-01-3P 108183-07-9P 108183-09-1P 108183-10-4P 108183-11-5P 108183-12-6P 108183-13-7P 108183-14-8P 108183-20-6P 108183-21-7P 108183-22-8P 108183-23-9P 108194-70-3P 108194-71-4P 108194-72-5P

RL: SPN (Synthetic preparation); PREP (Preparation)  
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=> d his

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L1 STRUCTURE UPLOADED

L2 4 S L1

L3 44 S L1 FULL

FILE 'CAPLUS' ENTERED AT 15:32:41 ON 11 OCT 2007

L4 44 S L3

FILE 'STNGUIDE' ENTERED AT 15:33:12 ON 11 OCT 2007

FILE 'CAPLUS' ENTERED AT 15:34:30 ON 11 OCT 2007

L5 5 S L4 AND ZINC

FILE 'STNGUIDE' ENTERED AT 15:34:52 ON 11 OCT 2007

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FILE 'STNGUIDE' ENTERED AT 15:35:22 ON 11 OCT 2007

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L6 1 S L5 AND SULFIDE

=>

--Logging off of STN---

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NEWS 2 JUL 02 LMEDLINE coverage updated  
NEWS 3 JUL 02 SCISEARCH enhanced with complete author names  
NEWS 4 JUL 02 CHEMCATS accession numbers revised  
NEWS 5 JUL 02 CA/CAplus enhanced with utility model patents from China  
NEWS 6 JUL 16 CAplus enhanced with French and German abstracts  
NEWS 7 JUL 18 CA/CAplus patent coverage enhanced  
NEWS 8 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification  
NEWS 9 JUL 30 USGENE now available on STN  
NEWS 10 AUG 06 CAS REGISTRY enhanced with new experimental property tags  
NEWS 11 AUG 06 BEILSTEIN updated with new compounds  
NEWS 12 AUG 06 FSTA enhanced with new thesaurus edition  
NEWS 13 AUG 13 CA/CAplus enhanced with additional kind codes for granted patents  
NEWS 14 AUG 20 CA/CAplus enhanced with CAS indexing in pre-1907 records  
NEWS 15 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB  
NEWS 16 AUG 27 USPATOLD now available on STN  
NEWS 17 AUG 28 CAS REGISTRY enhanced with additional experimental spectral property data  
NEWS 18 SEP 07 STN AnaVist, Version 2.0, now available with Derwent World Patents Index  
NEWS 19 SEP 13 FORIS renamed to SOFIS  
NEWS 20 SEP 13 INPADOCDB enhanced with monthly SDI frequency  
NEWS 21 SEP 17 CA/CAplus enhanced with printed CA page images from 1967-1998  
NEWS 22 SEP 17 CAplus coverage extended to include traditional medicine patents  
NEWS 23 SEP 24 EMBASE, EMBAL, and LEMBASE reloaded with enhancements  
NEWS 24 OCT 02 CA/CAplus enhanced with pre-1907 records from Chemisches Zentralblatt

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=> zinc (S) "sodium sulfide"  
641794 ZINC  
139 ZINCS  
641819 ZINC  
(ZINC OR ZINCS)  
1147007 "SODIUM"  
40 "SODIUMS"  
1147016 "SODIUM"  
("SODIUM" OR "SODIUMS")  
332880 "SULFIDE"  
87975 "SULFIDES"  
366071 "SULFIDE"  
("SULFIDE" OR "SULFIDES")  
13224 "SODIUM SULFIDE"  
("SODIUM" (W) "SULFIDE")

L1 373 ZINC (S) "SODIUM SULFIDE"

=> d scan

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
IC ICM A62D003-00  
INCL 588255000; 588252000; 588256000; 044271000; 264004300; 264004700  
CC 60-3 (Waste Treatment and Disposal)  
Section cross-reference(s): 35, 46, 61  
TI Process for disposing of solvent-containing liquids  
ST absorbent blend treatment disposal solvent waste  
IT Amides, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(N-(hydroxyalkyl), as solvent type, absorption of; disposal of  
solvent-containing liqs. without polluting groundwater by mixing them with  
inventive absorbent blend)  
IT Wastewater treatment  
(absorption; disposal of solvent-containing liqs. without polluting  
groundwater by mixing them with inventive absorbent blend)  
IT Sulfonic acids, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(alkanesulfonic, salts, as solvent type, absorption of; disposal of  
solvent-containing liqs. without polluting groundwater by mixing them with  
inventive absorbent blend)  
IT Amine oxides  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(as solvent type, absorption of; disposal of solvent-containing liqs.  
without polluting groundwater by mixing them with inventive absorbent  
blend)  
IT Wastewater treatment  
(biol.; disposal of solvent-containing liqs. without polluting groundwater  
by mixing them with inventive absorbent blend)  
IT Amides, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(coco, N,N-bis(hydroxyethyl), Carsamide CA, as solvent, absorption of;  
disposal of solvent-containing liqs. without polluting groundwater by  
mixing them with inventive absorbent blend)  
IT Amides, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(coco, N-[3-(dimethylamino)propyl], N-oxides, Jordamox CAPA, as  
solvent, absorption of; disposal of solvent-containing liqs. without  
polluting groundwater by mixing them with inventive absorbent blend)  
IT Absorbents  
Crosslinking  
Solvents  
(disposal of solvent-containing liqs. without polluting groundwater by  
mixing them with inventive absorbent blend)  
IT Perlite  
Pumice  
RL: NUU (Other use, unclassified); USES (Uses)  
(disposal of solvent-containing liqs. without polluting groundwater by  
mixing them with inventive absorbent blend)  
IT Wastewater treatment  
(enzymic; disposal of solvent-containing liqs. without polluting  
groundwater by mixing them with inventive absorbent blend)  
IT Alcohols, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)

(ethoxylated, as solvent type, absorption of; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Bacilli

(for biodegrdn. of hydrocarbon solvents; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Enzymes, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)

(for degradation of hydrocarbon solvents; disposal of solvent-containing liqs.

without polluting groundwater by mixing them with inventive absorbent blend)

IT Solid wastes

(formation of; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Corncob

(ground; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Groundwater pollution

(prevention of; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Wastewater treatment

(solidification; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Wastewater

(solvent-containing; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Wastes

(solvents; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT Solvents

(waste; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT 7440-44-0, Carbon, uses

RL: NUU (Other use, unclassified); USES (Uses)

(activated; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT 9003-11-6, Ethylene oxide propylene oxide copolymer

RL: PEP (Physical, engineering or chemical process); PYP (Physical process); PROC (Process)

(as solvent type, absorption of; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT 9002-93-1, Triton X 45 9016-45-9, Polyethylene glycol nonylphenyl ether  
25155-30-0, Calsoft F 90 691397-13-4, Pluronic L 61

RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)

(as solvent, absorption of; disposal of solvent-containing liqs. without polluting groundwater by mixing them with inventive absorbent blend)

IT 7439-92-1, Lead, reactions 7439-96-5, Manganese, reactions 7439-97-6,

Mercury, reactions 7440-02-0, Nickel, reactions 7440-31-5, Tin, reactions 7440-33-7, Tungsten, reactions 7440-62-2, Vanadium, reactions 7440-66-6, Zinc, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)

(complexation of, by sodium sulfide; disposal of solvent-containing liqs. without polluting groundwater by mixing them with

inventive absorbent blend)

IT 1305-78-8, Calcium oxide, uses 1344-28-1, Aluminum oxide, uses  
7631-86-9, Silicon oxide, uses 7778-18-9, Calcium sulfate 9003-06-9D,  
2-Propenamide, polymer with 2-propenoic acid, salts  
RL: NUU (Other use, unclassified); USES (Uses)  
(disposal of solvent-containing liqs. without polluting groundwater by  
mixing them with inventive absorbent blend)

IT 1313-82-2, Sodium sulfide, reactions  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(for complexation of heavy metals; disposal of solvent-containing liqs.  
without polluting groundwater by mixing them with inventive absorbent  
blend)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 72-2 (Electrochemistry)  
Section cross-reference(s): 35, 36, 56

TI Electropolymerization of pyrrole on zinc-lead-silver alloys electrodes in  
acidic and neutral organic media

ST electropolymerization of pyrrole on zinc lead silver alloy electrode org media; sulfide  
pretreated zinc alloy electrode electropolymerization of pyrrole

IT X-ray diffraction  
(by zinc-lead-silver alloys in pyrrole electropolymerization study)

IT Polymerization  
(electrochem.; of pyrrole on zinc-lead-silver alloy electrodes in  
acidic and neutral organic media containing p-toluenesulfonate and effect of  
sulfide pretreatment of electrode)

IT Cyclic voltammetry  
(in pyrrole electropolymerization on sulfide-pretreated zinc-lead-silver alloy  
in acetonitrile containing tetraethylammonium tosylate and pyrrole)

IT Binding energy

X-ray photoelectron spectra  
(of polypyrrole electrodeposited on pretreated zinc-lead-silver alloy  
electrodes)

IT IR spectra  
(of polypyrrole films doped and undoped with p-toluenesulfonate)

IT Adhesion, physical  
(of polypyrrole films electrosynthesized on pretreated zinc-lead-silver  
alloy)

IT Polymer morphology  
(of polypyrrole films electrosynthesized on pretreated zinc-lead-silver  
alloy in organic media)

IT Solvent effect  
(on electropolymerization of pyrrole on zinc-lead-silver alloy electrodes)

IT Electric potential  
(oscillations; in pyrrole electropolymerization on zinc-lead-silver alloy in  
acetonitrile containing tetraethylammonium tosylate and pyrrole)

IT Electron donors  
(solvent; in electropolymerization of pyrrole on zinc-lead-silver alloy  
electrodes in organic media containing p-toluenesulfonate)

IT Chemically modified electrodes  
(sulfide-pretreated zinc alloy for pyrrole electropolymerization.)

IT 30604-81-0P, Polypyrrole  
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)  
(electrochem. preparation on zinc-lead-silver alloy electrodes and XPS  
spectra of polypyrrole film electrodeposited on pretreated zinc alloy)

IT 477946-11-5, Lead 10, silver 25, zinc 65    477946-12-6, Lead 60, silver 10, zinc 30  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (electrode with and without sulfide pretreatment for electropolymer. of pyrrole in acidic and neutral organic media containing p-toluenesulfonate)

IT 7440-06-4, Platinum, uses  
 RL: DEV (Device component use); PRP (Properties); USES (Uses)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes and comparison with platinum electrodes in organic media containing p-toluenesulfonate)

IT 75-05-8, Acetonitrile, uses  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in acetonitrile containing tetraethylammonium p-toluenesulfonate and effect of sulfide pretreatment of electrode)

IT 109-97-7, Pyrrole  
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in acidic and neutral organic media containing p-toluenesulfonate and effect of sulfide pretreatment of electrodes)

IT 733-44-8, Tetraethylammonium p-toluenesulfonate  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in acidic and neutral organic media containing tetraethylammonium p-toluenesulfonate and effect of sulfide pretreatment of electrode)

IT 98-95-3, Nitrobenzene, uses  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in nitrobenzene containing tetraethylammonium p-toluenesulfonate and effect of sulfide pretreatment of electrode)

IT 108-32-7, Propylene carbonate  
 RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
 (electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in propylene carbonate containing tetraethylammonium p-toluenesulfonate and effect of sulfide pretreatment of electrode)

IT 16722-51-3, p-Toluenesulfonic acid, ion(1-), properties  
 RL: PEP (Physical, engineering or chemical process); PRP (Properties); PYP (Physical process); PROC (Process)  
 (polypyrrole doped with; IR spectra of electrogenerated)

IT 1313-82-2, sodium sulfide na2s, uses  
 RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)  
 (pretreatment of zinc-lead-silver alloy electrodes by aqueous sodium sulfide for electropolymer. of pyrrole on zinc-lead-silver alloy electrodes in acidic and neutral organic media containing p-toluenesulfonate)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
 CC 79-6 (Inorganic Analytical Chemistry)  
 Section cross-reference(s): 59, 60, 61  
 TI Determination of zinc in environmental samples by anodic stripping voltammetry  
 ST zinc detn environmental sample anodic stripping voltammetry  
 IT Air analysis  
 Anodic stripping voltammetry  
 Environmental analysis

Oyster  
Wastewater treatment sludge  
(zinc determination in environmental samples by anodic stripping voltammetry with sulfide addition for removal of copper(II) ion interference)

IT 7732-18-5, Water, analysis  
RL: AMX (Analytical matrix); ANST (Analytical study)  
(zinc determination in environmental samples by anodic stripping voltammetry with sulfide addition for removal of copper(II) ion interference)

IT 7440-66-6, Zinc, analysis  
RL: ANT (Analyte); ANST (Analytical study)  
(zinc determination in environmental samples by anodic stripping voltammetry with sulfide addition for removal of copper(II) ion interference)

IT 1313-82-2, Sodium sulfide, analysis  
RL: ARU (Analytical role, unclassified); ANST (Analytical study)  
(zinc determination in environmental samples by anodic stripping voltammetry with sulfide addition for removal of copper(II) ion interference)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
IC ICM H01M006-06  
ICS H01M004-42  
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)  
TI Manufacture of zinc alkali battery  
ST zinc anode battery potassium sulfide; surfactant gelled zinc battery anode  
IT Anodes  
(battery, zinc, gelled, manufacture of, alkali metal sulfides and surfactants in)  
IT 135832-86-9 141709-68-4 141709-69-5 141709-70-8 141709-71-9  
RL: USES (Uses)  
(anodes, manufacture of gelled, alkali metal sulfides and surfactants in, for alkaline batteries)  
IT 1312-73-8, Potassium sulfide 1313-82-2, Sodium sulfide  
(Na<sub>2</sub>S), uses 1344-08-7, Sodium sulfide (Na<sub>2</sub>(Sx))  
12136-58-2, Lithium sulfide 37199-66-9, Potassium sulfide (K<sub>2</sub>(Sx))  
141656-79-3  
RL: USES (Uses)  
(in gelled zinc anode manufacture, for batteries)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 66-3 (Surface Chemistry and Colloids)  
TI Surface analysis of polymer systems. 3. Zinc sulfide-cadmium sulfide/Nafion  
ST Nafion cadmium zinc sulfide surface structure  
IT Surface structure  
(of Nafion films containing cadmium sulfide and zinc sulfide ppts., light effect on)  
IT Light, chemical and physical effects  
(on surface structure of Nafion films containing precipitated cadmium sulfide and  
zinc sulfide in presence of aqueous sodium sulfide)  
IT 1313-82-2, properties  
RL: PRP (Properties)

(irradiation of Nafion films with visible light in presence of aqueous, surface  
structure in relation to)  
IT 7783-06-4, uses and miscellaneous  
RL: USES (Uses)  
(precipitation by, of cadmium sulfide and zinc sulfide in Nation films, surface  
structure in relation to)  
IT 1314-98-3, properties  
RL: PRP (Properties)  
(precipitation of cadmium sulfide and, in Nafion films, surface structure in  
relation to)  
IT 1306-23-6, properties  
RL: PRP (Properties)  
(precipitation of zinc sulfide and, in Nafion films, surface structure in  
relation to)  
IT 66796-30-3  
RL: PRP (Properties)  
(surface structure of, containing precipitated cadmium sulfide and zinc  
sulfide)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 9 (Electric and Magnetic Phenomena)  
TI Luminescence of low-temperature manganese-activated zinc sulfide phosphors  
IT Luminescence  
(impact, of ZnS containing Cu and Mn suspended in polystyrene)  
IT Luminescence  
Phosphorescence  
(of zinc sulfide, containing Mn, and effect of preparation conditions  
thereon)  
IT 7647-01-0P, Hydrochloric acid  
RL: PREP (Preparation)  
(from vinyl chloride polymers, zinc sulfide Mn-containing phosphor prepared  
in presence of, luminescence of)  
IT 7439-96-5P, Manganese  
RL: PREP (Preparation)  
(phosphors containing, luminescence and phosphorescence of, effect of  
preparation on)  
IT 1314-98-3P, Zinc sulfide  
RL: PREP (Preparation)  
(phosphors, includes scintillators, luminescence and phosphorescence of  
Mg-containing, and effect of preparation conditions thereon)  
IT 9003-53-6, Styrene polymers  
(zinc sulfide Cu- and Mn-doped phosphor suspended in, impact  
luminescence of)  
IT 1313-82-2P, Sodium sulfide, Na<sub>2</sub>S 7722-84-1P,  
Hydrogen peroxide  
RL: PREP (Preparation)  
(zinc sulfide Mn-containing phosphor prepared in presence of,  
luminescence of)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
IC ICM C08L033-26

ICS C08F002-44; C08F002-02; C08F120-56; C08K009-04; G02B001-04  
CC 37-6 (Plastics Manufacture and Processing)  
Section cross-reference(s): 73  
TI Method for preparation of transparent polymer optical material having high nanoparticle content  
ST sulfur nanoparticle acrylic polymer composite optical material prepn  
IT Nanocomposites  
Optical materials  
Transparent materials  
(preparation of transparent polymer optical material having high nanoparticle content)  
IT 26793-34-0P, Dimethyl acrylamide homopolymer 29760-26-7P, Dimethyl acrylamide-styrene copolymer 31018-13-0P, N,N-Dimethylacrylamide-methyl methacrylate copolymer 132535-35-4P, N,N-Dimethylacrylamide-divinylbenzene-styrene copolymer 896109-99-2P, N,N-Dimethylacrylamide-triethylene glycol diacrylate copolymer  
RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(preparation of transparent polymer optical material having high nanoparticle content)  
IT 62-55-5, Thioacetamide 62-56-6, Thiourea, uses 106-45-6, p-Methyl thiophenol 557-34-6, Zinc acetate 628-52-4, Chromium diacetate 1313-82-2, Sodium sulfide, uses 4946-13-8, p-Ethyl thiophenol 7646-85-7, Zinc chloride, uses 7733-02-0, Zinc sulfate 7783-06-4, Hydrogen sulfide, uses 10049-05-5, Chromium dichloride 13637-61-1, Zinc perchlorate 13931-95-8, Chromium diperchlorate 30499-56-0, Mercaptomethylstyrene 53339-53-0 242791-24-8  
RL: MOA (Modifier or additive use); USES (Uses)  
(preparation of transparent polymer optical material having high nanoparticle content)  
IT 67-68-5, Dimethyl sulfoxide, uses 68-12-2, N,N-Dimethylformamide, uses 127-19-5, Dimethyl acetamide  
RL: NUU (Other use, unclassified); USES (Uses)  
(preparation of transparent polymer optical material having high nanoparticle content)  
IT 60-24-2, Mercaptoethanol 96-27-5, Thioglycerol 108-98-5, Thiophenol, uses 63947-56-8  
RL: MOA (Modifier or additive use); USES (Uses)  
(surface modifier; preparation of transparent polymer optical material having high nanoparticle content)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 72-8 (Electrochemistry)  
Section cross-reference(s): 56, 76, 78  
TI Prospective trends of galvano plastics metallization of wax  
ST galvanoplastics wax metalization nickel electrodeposition copper zinc sulfide deposition  
IT Coating process  
(electroless; of zinc and copper sulfides on wax surface in process of its metalization)  
IT Coating process  
(metalization; prospective trends of galvano plastics metalization of wax)  
IT Electric conductivity  
(of copper and zinc sulfide film deposited on wax surface)

IT pH  
(of electrolyte for electrodeposition of nickel on sulfide activated surface of wax)

IT Electrodeposition  
(of nickel on sulfide activated surface of wax)

IT Waxes

RL: MSC (Miscellaneous)  
(prospective trends of galvano plastics metalization of)

IT Electroforming  
(prospective trends of galvano plastics metalization of wax)

IT 1336-21-6, Ammonium hydroxide 7733-02-0, Zinc sulfate 7758-98-7,  
Copper sulfate, reactions

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(chemical deposition of zinc and copper sulfides on wax surface in process of its metalization, in solution containing)

IT 1313-82-2, Sodium sulfide, reactions

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(chemical deposition of zinc and copper sulfides on wax surface in sulfate solution using)

IT 7718-54-9, Nickel chloride, reactions 13770-89-3, Nickel Sulfamate

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(electrodeposition of nickel on sulfide activated surface of wax in solution containing)

IT 151-21-3, Sodium dodecylsulfate, uses 10043-35-3, Boric acid, uses

RL: NUU (Other use, unclassified); USES (Uses)  
(electrodeposition of nickel on sulfide activated surface of wax in solution containing)

IT 7440-02-0P, Nickel, processes

RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); PREP (Preparation); PROC (Process)  
(prospective trends of galvano plastics metalization of wax with)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN

CC 72-8 (Electrochemistry)  
Section cross-reference(s): 55, 66

TI Electroplating of plastics using a current-conducting layer

ST iron nickel alloy electrodeposition plastic current conducting layer

IT Heat treatment  
(of Fe-Ni alloy electrodeposits on plastics with current-conducting layer)

IT Adhesion, physical  
Mechanical properties  
(of Fe-Ni alloy electrodeposits with plastics with current-conducting layer)

IT Adsorption  
(of ammonia zinc complex on plastic surface during electroplating using current-conducting layer)

IT Current efficiency  
(of electrodeposition of Fe-Ni alloy on plastics with current-conducting layer from sulfamate solution)

IT Optimization

(of etching of plastics surface with CrO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub> solution in process of electroplating layer)

IT Etching  
(of plastics surface with CrO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub> solution in process of electroplating layer)

IT Sulfidation  
(of zinc hydroxide with Na<sub>2</sub>S on plastic during its electroplating using current-conducting layer)

IT Exchange reaction  
(of zinc sulfide with Pb(NO<sub>3</sub>)<sub>2</sub> during plastics electroplating using current-conducting layer)

IT Contact angle  
(optimization of etching of plastics surface with CrO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub> solution in process of electroplating layer, using)

IT 77-92-9, Citric acid, uses 81-07-2, Saccharine 110-65-6,  
2-Butyne-1,4-diol 151-21-3, Sodium laurylsulfate, uses 10043-35-3,  
Boric acid, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(electrodeposition of Fe-Ni alloy on plastics with current-conducting layer from solution containing)

IT 7718-54-9, Nickel dichloride, properties 13770-89-3, Nickel sulfamate  
14017-39-1, Iron sulfamate  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(electrodeposition of Fe-Ni alloy on plastics with current-conducting layer from solution containing)

IT 11148-32-6  
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)  
(electroplating of plastics using current-conducting layer)

IT 9003-18-3, Acrylonitrile butadiene copolymer  
RL: PRP (Properties)  
(electroplating using current-conducting layer)

IT 1333-82-0, Chromium trioxide 7664-93-9, Sulfuric acid, uses  
RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(etching of plastics surface with CrO<sub>3</sub>-H<sub>2</sub>SO<sub>4</sub> solution in process of electroplating layer)

IT 10099-74-8, Lead nitrate  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(exchange reaction with zinc sulfide during plastics electroplating using current-conducting layer)

IT 1314-87-0, Lead sulfide  
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)  
(formation by exchange reaction on plastics surface during its electroplating using current-conducting layer from)

IT 1314-98-3, Zinc sulfide, properties 20427-58-1, Zinc hydroxide  
RL: FMU (Formation, unclassified); PRP (Properties); FORM (Formation, nonpreparative)  
(formation on plastic during its electroplating using current-conducting layer)

IT 1313-82-2, Sodium sulfide, properties  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(sulfurization of zinc hydroxide with Na<sub>2</sub>S on plastic during its electroplating using current-conducting layer)

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
IC ICM C01B017-22  
ICS C01B017-36  
CC 49-5 (Industrial Inorganic Chemicals)  
TI Manufacture of purified sodium sulfide from anhydrous mirabilite  
ST sodium sulfide manuf anhyd mirabilite; redn mirabilite coal sodium sulfide  
manuf  
IT Coal  
RL: USES (Uses)  
(reductant, in sodium sulfide manufacture from anhydrous mirabilite)  
IT 1344-28-1P, Alumina, uses  
RL: PREP (Preparation); USES (Uses)  
(activated, iron removal by, in sodium sulfide manufacture from anhydrous  
mirabilite)  
IT 14567-58-9, Mirabilite  
RL: USES (Uses)  
(anhydrous, reduction of, with coal, in sodium sulfide manufacture)  
IT 1305-78-8, Calcia, uses 1313-13-9, Manganese dioxide, uses 1314-13-2,  
Zinc oxide, uses 7601-54-9, Trisodium phosphate  
RL: USES (Uses)  
(iron removal by, in sodium sulfide manufacture from  
anhydrous mirabilite)  
IT 1313-82-2P, Sodium sulfide, preparation  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manufacture of, from mirabilite, by reduction using coal)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L1 373 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 54-1 (Extractive Metallurgy)  
TI Effect of oxygen on the behavior of reagents in the desorption of the  
collector  
ST copper zinc flotation collector desorption  
IT Zinc ores, preparation  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(copper-, flotation of, xanthate desorption by sodium  
sulfide and activated carbon in)  
IT Copper ores, preparation  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(zinc-, flotation of, xanthate desorption by sodium  
sulfide and activated carbon in)  
IT 7440-44-0, Carbon, uses and miscellaneous  
RL: USES (Uses)  
(activated, desorption by, of xanthate collector in copper-zinc ore  
flotation)  
IT 1313-82-2, sodium sulfide, uses and miscellaneous  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(desorption with, of xanthate collector in copper-zinc ore  
flotation)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

=> zinc (S) remov? (S) "sodium sulfide"  
641794 ZINC  
139 ZINCS  
641819 ZINC  
(ZINC OR ZINCS)

1317840 REMOV?  
1147007 "SODIUM"  
40 "SODIUMS"  
1147016 "SODIUM"  
("SODIUM" OR "SODIUMS")  
332880 "SULFIDE"  
87975 "SULFIDES"  
366071 "SULFIDE"  
("SULFIDE" OR "SULFIDES")  
13224 "SODIUM SULFIDE"  
("SODIUM"(W)"SULFIDE")  
L2 30 ZINC (S) REMOV? (S) "SODIUM SULFIDE"

=> d scan

L2 30 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
IC C01F007-02A; C01F007-34B; C01G003-12B  
INCL 023141000  
CC 54 (Extractive Metallurgy)  
TI Purifying aluminate solutions  
ST aluminate soln purifn; refining aluminate soln; zinc removal aluminate  
soln  
IT 7440-66-6, uses and miscellaneous  
RL: REM (Removal or disposal); PROC (Process)  
(removal of, from aluminate solns. by sodium sulfide)  
IT 1344-28-1P, preparation  
RL: PREP (Preparation)  
(zinc removal from aluminate solns. in, by  
sodium sulfide)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 30 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 63-4 (Pharmaceuticals)  
TI Method for producing active polypeptide-calcium and zinc-protein from sea  
cucumber  
ST polypeptide calcium zinc protein sea cucumber  
IT Centrifugation  
Freezing  
Holothurioidea  
Homogenization  
Polymerization  
Pulping  
(method for producing active polypeptide-calcium and zinc-protein from  
sea cucumber)  
IT Peptides, biological studies  
RL: FFD (Food or feed use); IMF (Industrial manufacture); RCT (Reactant);  
BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent);  
USES (Uses)  
(method for producing active polypeptide-calcium and zinc-protein from  
sea cucumber)  
IT Proteins  
RL: FFD (Food or feed use); RCT (Reactant); BIOL (Biological study); RACT  
(Reactant or reagent); USES (Uses)  
(method for producing active polypeptide-calcium and zinc-protein from  
sea cucumber)  
IT 9002-07-7, Trypsin

RL: CAT (Catalyst use); USES (Uses)  
(method for producing active polypeptide-calcium and zinc-protein from sea cucumber)

IT 7440-66-6, Zinc, biological studies 7440-70-2, Calcium, biological studies  
RL: FFD (Food or feed use); RCT (Reactant); BIOL (Biological study); RACT (Reactant or reagent); USES (Uses)  
(method for producing active polypeptide-calcium and zinc-protein from sea cucumber)

IT 64-17-5, Ethanol, uses 64-19-7, Acetic acid, uses 1313-82-2, Sodium sulfide, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(method for producing active polypeptide-calcium and zinc-protein from sea cucumber)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 30 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 54-2 (Extractive Metallurgy)  
TI Electrolytic method for preparing zinc by alkaline leaching process  
ST electrolysis zinc alk leaching calcium oxide sodium sulfide  
IT Glues  
(bone glues; electrolytic method for preparing zinc by alkaline leaching process)  
IT Smelting  
(electrolytic method for preparing zinc by alkaline leaching process)  
IT Bone  
(glues; electrolytic method for preparing zinc by alkaline leaching process)  
IT 7440-44-0, Carbon, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(activated; electrolytic method for preparing zinc by alkaline leaching process)  
IT 1314-13-2, Zinc oxide, processes 3486-35-9, Zinc carbonate . 14374-77-7, Willemite  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); PROC (Process)  
(electrolytic method for preparing zinc by alkaline leaching process)  
IT 7439-92-1, Lead, processes  
RL: CPS (Chemical process); PEP (Physical, engineering or chemical process); REM (Removal or disposal); PROC (Process)  
(electrolytic method for preparing zinc by alkaline leaching process)  
IT 1305-78-8, Calcium oxide, uses 1310-73-2, Sodium hydroxide, uses  
1313-82-2, Sodium sulfide, uses 1663-45-2, DPE 902759-57-3, JZ 1  
RL: NUU (Other use, unclassified); USES (Uses)  
(electrolytic method for preparing zinc by alkaline leaching process)  
IT 7440-66-6P, Zinc, preparation  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(electrolytic method for preparing zinc by alkaline leaching process)  
IT 12597-68-1, Stainless steel, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(electrolytic method for preparing zinc by alkaline leaching process)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):1

L2 30 ANSWERS CAPLUS COPYRIGHT 2007 ACS on STN  
CC 54-2 (Extractive Metallurgy)  
TI Combined wet method-dry method for recovering copper, nickel, and noble

metals from heavy metal-containing sludge resulted from production of  
 electronics and electroplating  
 ST recovery copper nickel noble metal waste  
 IT Extraction  
 Leaching  
 Precipitation (chemical)  
 Sintering  
 Smelting  
 Wastes  
     (combined wet method-dry method for recovering copper, nickel, and  
     noble metals from heavy metal-containing sludge resulted from production of  
     electronics and electroplating)  
 IT 7440-02-0P, Nickel, preparation 7440-05-3P, Palladium, preparation  
 7440-22-4P, Silver, preparation 7440-50-8P, Copper, preparation  
 7440-57-5P, Gold, preparation  
 RL: PUR (Purification or recovery); PREP (Preparation)  
     (combined wet method-dry method for recovering copper, nickel, and  
     noble metals from heavy metal-containing sludge resulted from production of  
     electronics and electroplating)  
 IT 497-19-8, Sodium carbonate, reactions 1313-82-2, Sodium sulfide,  
     reactions 7664-93-9, Sulfuric acid, reactions 7681-49-4, Sodium  
     fluoride, reactions 7722-84-1, Hydrogen peroxide, reactions  
 RL: RGT (Reagent); RACT (Reactant or reagent)  
     (combined wet method-dry method for recovering copper, nickel, and  
     noble metals from heavy metal-containing sludge resulted from production of  
     electronics and electroplating)

HOW MANY MORE ANSWERS DO YOU WISH TO SCAN? (1):0

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(FILE 'HOME' ENTERED AT 15:37:39 ON 11 OCT 2007)

FILE 'CPLUS' ENTERED AT 15:37:51 ON 11 OCT 2007

L1       373 ZINC (S) "SODIUM SULFIDE"  
 L2       30 ZINC (S) REMOV? (S) "SODIUM SULFIDE"

=> d 12 1-30 ibib abs

L2 ANSWER 1 OF 30 CPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2007:467752 CPLUS  
 DOCUMENT NUMBER: 146:507539  
 TITLE: Method for producing active polypeptide-calcium and  
       zinc-protein from sea cucumber  
 INVENTOR(S): Ji, Jianguo; Li, Guozhong; Huang, Shikuan  
 PATENT ASSIGNEE(S): Peop. Rep. China  
 SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 8pp.  
 CODEN: CNXXEV  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Chinese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1951402	A	20070425	CN 2006-10069408	20061013
PRIORITY APPLN. INFO.:			CN 2006-10069408	20061013

AB The title method comprises: (1) removing intestine of fresh sea cucumber, washing, pulping, adding distilled water at a pulp/water volume ratio of 1:1, adjusting pH to 4.5-5.5 with glacial acetic acid, and stirring for 1-3 h, (2) adding sodium sulfide to pH 5-6, filtering, adding trypsin (15-25 weight% of the fresh sea cucumber), and homogenizing for reaction at 40-45°C for 6-10 h, (3) adding biol. calcium (3-10 weight% of the fresh sea cucumber) and/or biol. zinc (0.5-1 weight% of the fresh sea cucumber), and polymerizing to form polypeptide-calcium and/or zinc-protein, and (4) adding 3 times of ethanol, freezing at -5 to -15°C for 8-10 h, centrifuging, and vacuum-drying at 5-40°C to obtain the product. The invention has the advantages of calcium supplement, skeleton structure improvement, radiation and UV irradiation resistance, intravital metallic toxin removal, proper nutrient combination, and simple process.

L2 ANSWER 2 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:753796 CAPLUS

DOCUMENT NUMBER: 145:192390

TITLE: Electrolytic method for preparing zinc by alkaline leaching process

INVENTOR(S): Kuang, Zhengguo

PATENT ASSIGNEE(S): Peop. Rep. China

SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 7 pp.

CODEN: CNXKEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1807665	A	20060726	CN 2005-10010613	20050118
PRIORITY APPLN. INFO.:			CN 2005-10010613	20050118

AB The title method comprises: (1) pulverizing zinc raw ore, adding a separating agent (CaO) 30 weight% of the dry total ore, milling, pretreating in.

a pretreating kettle at 40-50° for 50 min, and filtering to remove the pretreating solution, (2) feeding into a leaching kettle, adding sodium hydroxide (the ratio of sodium hydroxide to zinc = 6:1), leaching at 75-85° for 35-40 min, and filtering, (3) purifying the filtrate at normal temperature for 30-35 min by adding separating agent

(sodium sulfide) 4 times of the Pb content in the filtrate, and filtering, and (4) feeding the filtrate into an electrolyte tank, feeding into an electrolytic bath, adding additives such as bone glue 0.5-0.6 kg per ton zinc, regulating alkaline/zinc ratio to 7-10, and electrolyzing. The method can use lean ore such as zinc oxide ore, zinc carbonate ore, galmei, willemite, etc. with zinc contents less than 20%, and can reduce the cost and alkaline consumption.

L2 ANSWER 3 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:429611 CAPLUS

DOCUMENT NUMBER: 145:149507

TITLE: Combined wet method-dry method for recovering copper, nickel, and noble metals from heavy metal-containing sludge resulted from production of electronics and electroplating

INVENTOR(S): Sun, Tao; Yue, Xilong  
PATENT ASSIGNEE(S): Peop. Rep. China  
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 17 pp.  
CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1718784	A	20060111	CN 2005-10035633	20050707
PRIORITY APPLN. INFO.:			CN 2005-10035633	20050707

AB The title process includes leaching sludge with sulfuric acid in a reactor; adding sodium sulfide into the reactor to form copper sulfide entering into copper-containing sludge; adding iron powder to replace copper, noble metals gold, silver, palladium entering into copper-containing sludge; filtering to give nickel-containing solution and copper-containing sludge; oxidizing bivalent iron ions in the nickel solution into trivalent iron ions with iron oxidizer, neutralizing with sodium carbonate to precipitate iron, filtering to remove iron as well as chromium; adding sodium fluoride to remove impurities calcium, magnesium, and aluminum etc., wherein iron and less than 5% nickel enter nickel-containing sludge; further extracting iron, copper, chromium, calcium, magnesium, aluminum, zinc from remaining nickel solution, reverse extracting resulted organic phase using sulfuric acid to get pure nickel solution;  
precipitating nickel using sodium carbonate to get refined nickel carbonate; resp.  
sintering the copper-containing sludge and the nickel-containing iron sludge to get sintered copper cake and sintered nickel cake; and reducing/smelting the copper cake and the nickel cake at high temperature to obtain black copper and low-grade nickel matte, wherein the copper and noble metals gold, silver, palladium are recovered from copper black, and the nickel is recovered from low-grade nickel matte.

L2 ANSWER 4 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2005:693118 CAPLUS  
DOCUMENT NUMBER: 144:356896  
TITLE: Gamma ray-induced reduction and removal of heavy metal ions in aqueous solutions  
AUTHOR(S): Wu, Xing-Zheng; Takami, Takayuki; Somekawa, Kenichi; Nishio, Shigeru  
CORPORATE SOURCE: Department of Materials Science and Engineering, Faculty of Engineering, Fukui University, Fukui-shi, 910-8507, Japan  
SOURCE: Radioisotopes (2005), 54(6), 179-184  
CODEN: RAISAB; ISSN: 0033-8303  
PUBLISHER: Nippon Aisotopu Kyokai  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Possible reduction and removal of heavy metals ( $\text{Ag}^+$ ,  $\text{Zn}^{2+}$ ,  $\text{Cu}^{2+}$ ,  $\text{Co}^{2+}$ ) from water by  $\gamma$ -ray irradiation was examined. No concentration change was observed when aqueous solns. of metal ions were irradiated with  $\gamma$ -rays directly or after bubbling with He gas. Metal concns. were reduced to lower oxidation states by irradiation in the presence of  $\text{Na}_2\text{SO}_3$ . Ppts. were observed in all

irradiated solns. containing 4 metals (Ag+, Zn<sup>2+</sup>, Cu<sup>2+</sup>, Co<sup>2+</sup>). Ag+ was reduced to metallic Ag.

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2004:258983 CAPLUS

DOCUMENT NUMBER: 141:263684

TITLE: Flotation study on separating skarn-type complicated copper-zinc sulphide ore

AUTHOR(S): Yu, Xue; Ma, Guang-qing

CORPORATE SOURCE: Shenyang Research Institute of Nonferrous Metals, Shenyang, 110023, Peop. Rep. China

SOURCE: Youse Jinshu, Xuankuang Bufen (2003), (6), 10-13  
CODEN: YJXBA5; ISSN: 1671-9492

PUBLISHER: Youse Jinshu Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB The view of using sodium sulfide to remove and fix Cu<sup>2+</sup> in the pulp (sodium sulfide has function of restrainer of sphalerite and pyrite and removing reagent), using SK9011 that has more strong selecting as collectors of separating copper and zinc, using reasonable proportion of zinc sulfate and sodium sulfite as main restrainer of sphalerite was advanced, adopting prior-pulp flotation technol. flowsheet aiming at characters of the Complicated skarn type copper-zinc sulfide ore of closing dissemination size and sphalerite being activated Cu<sup>2+</sup>, the separating copper-zinc question of this ore was solved.

L2 ANSWER 6 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2002:669405 CAPLUS

DOCUMENT NUMBER: 137:190298

TITLE: Removal of chromium VI compounds and zinc complexes from metalworking wastewater by using waste acid and waste sodium sulfide

INVENTOR(S): Gosch, Bodo

PATENT ASSIGNEE(S): Sachtleben Chemie GmbH, Germany

SOURCE: Ger. Offen., 2 pp.

CODEN: GWXXBX

DOCUMENT TYPE: Patent

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 10063580	A1	20020905	DE 2000-10063580	20001220
PRIORITY APPLN. INFO.:			DE 2000-10063580	20001220
AB Cr VI compds. and Zn chelate complexes are removed from metalworking wastewater by treatment with waste acid containing H <sub>2</sub> SO <sub>4</sub> and FeSO <sub>4</sub> followed by treatment with waste Na <sub>2</sub> S and neutralization with NaOH or lime milk.				
REFERENCE COUNT:	1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT			

L2 ANSWER 7 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2001:777548 CAPLUS

DOCUMENT NUMBER: Correction of: 2000:803419  
135:291721  
TITLE: Correction of: 134:59355  
Integrated hydrometallurgical process for production  
of zinc from electric arc furnace dust in alkaline  
medium  
AUTHOR(S): Zhao, Youcui; Stanforth, Robert  
CORPORATE SOURCE: Department of Environmental Engineering, National  
University of Singapore, Singapore, 119260, Singapore  
SOURCE: Journal of Hazardous Materials (2000), 80(1-3),  
223-240  
PUBLISHER: CODEN: JHMAD9; ISSN: 0304-3894  
Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB In this study, a novel and integrated hydrometallurgical process for the  
production of zinc powder from elec. arc furnace (EAF) dust in alkaline medium  
is  
reported. The dust is firstly hydrolyzed in water, and then fused in  
caustic soda at 350° for 1 h, followed by leaching in alkaline solution in  
which both zinc and lead are effectively extracted. Zinc powder is  
then produced by electrowinning from the leach solution after the lead is  
selectively removed by precipitation using sodium  
sulfide as precipitant. The EAF dust tested contained 25% Zn,  
1.8% Pb and 33% Fe. It was found that 38% of zinc and 68% of lead could  
be extracted from the dust when leached directly in caustic soda solution.  
Leaching of zinc increased to 80% when dust was directly fused with  
caustic soda followed by alkaline leaching. However, the leaching further  
increased to 95% when the dust was hydrolyzed first with water before  
fusion. Zinc powder with a purity of 99.95% was then produced by  
electrowinning from the lead depleted solution. Stainless electrodes were  
used as both anode and cathode.  
REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 8 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 2001:128679 CAPLUS  
DOCUMENT NUMBER: 134:270557  
TITLE: Removal of zinc from rubber thread manufacturing  
industry wastewater using chemical  
precipitant/flocculant  
AUTHOR(S): Subbiah, R. M.; Sastry, C. A.; Agamuthu, P.  
CORPORATE SOURCE: Green and Smart Sdn. Bhd., Bangunan Mardec, Selangor  
Darul Ehsan, 6800, Malay.  
SOURCE: Environmental Progress (2000), 19(4), 299-304  
CODEN: ENVPDI; ISSN: 0278-4491  
PUBLISHER: American Institute of Chemical Engineers  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Wastewater from the rubber thread manufacturing industry is acidic in nature  
with pH 3.8-4.4 and containing high concns. of COD, BOD, total-N and Zn. The  
high BOD:COD ratio of the wastewater (0.78-0.90) indicates that the rubber  
wastewater is biodegradable and can be treated effectively by an anaerobic  
digestion process commonly used in this industry. However, because the  
wastewater contained high concns. of Zn, 250-310 mg/L, which could inhibit  
the digestion process, it was pretreated by chemical  
precipitation/flocculation. A

treatment process using a combination of Na sulfide and polyelectrolyte LT 27 at concns. 800 and 5 mg/L, resp., is the most cost-effective system for Zn removal from the wastewater. Zn removal by Na sulfide is not affected by pH. The optimum settling time was 60 min, whereas the optimum flocculation time was 20 min, and a speed of 20 rpm in a 110-mm diameter reactor gave the best results. The estimated cost of Zn removal using this method was RM 1.04/m<sup>3</sup> (US \$0.26/m<sup>3</sup>) of wastewater discharged.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 9 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2000:803419 CAPLUS

DOCUMENT NUMBER: 134:59355

TITLE: Integrated hydrometallurgical process for production of zinc from electric arc furnace dust in alkaline medium

AUTHOR(S): Youcai, Z.; Stanforth, R.

CORPORATE SOURCE: Department of Environmental Engineering, National University of Singapore, Singapore, 119260, Singapore

SOURCE: Journal of Hazardous Materials (2000), 80(1-3), 223-240

CODEN: JHMAD9; ISSN: 0304-3894

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB In this study, a novel and integrated hydrometallurgical process for the production of zinc powder from elec. arc furnace (EAF) dust in alkaline medium is

reported. The dust is firstly hydrolyzed in water, and then fused in caustic soda at 350° for 1 h, followed by leaching in alkaline solution in which both zinc and lead are effectively extracted. Zinc powder is then produced by electrowinning from the leach solution after the lead is selectively removed by precipitation using sodium sulfide as precipitant. The EAF dust tested contained 25% Zn, 1.8% Pb and 33% Fe. It was found that 38% of zinc and 68% of lead could be extracted from the dust when leached directly in caustic soda solution. Leaching of zinc increased to 80% when dust was directly fused with caustic soda followed by alkaline leaching. However, the leaching further increased to 95% when the dust was hydrolyzed first with water before fusion. Zinc powder with a purity of 99.95% was then produced by electrowinning from the lead depleted solution. Stainless electrodes were used as both anode and cathode.

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 10 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:734152 CAPLUS

DOCUMENT NUMBER: 131:312204

TITLE: Manufacture of high-purity active zinc oxide using circulating ammonia water for impurity removal

INVENTOR(S): Li, Liben; Yang, Guohua; Dai, Shubin

PATENT ASSIGNEE(S): Huaxin Zinc Products Factory, Jintan City, Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 10 pp.

CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1149552	A	19970514	CN 1995-112746 CN 1995-112746	19951027 19951027
PRIORITY APPLN. INFO.:				

AB The process comprises (1) leaching crude ZnO (ZnO content >60%) with NH4OH, and NH4HCO3 (ZnO: NH4OH: NH4HCO3 weight ratio 1:8:(1-1.5)) at 50-80°, (2) adjusting the pH to neutrality and filtering, (3) reducing the impurities in the solution in two step process with H2O2 and Zn dust and then forming sulfide by adding Na2S, (4) evaporating for 5-8 h at 65-95° and from -0.05 to 0 MPa (ammonia obtained is absorbed by water and recycled), (5) dewatering, (6) drying at 110-150° for 2-3 h to obtain the basic Zn carbonate, and (7) calcining at 450-550°.

L2 ANSWER 11 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:381141 CAPLUS

DOCUMENT NUMBER: 131:75669

TITLE: Purification and impurity removing in production of active zinc oxide by coordination

AUTHOR(S): Peng, Xiaochun; Peng, Qingjing; Zou, Xiaoyong; Huang, Cheng

CORPORATE SOURCE: Department of Chemistry, Jishou University, Jishou, 416000, Peop. Rep. China

SOURCE: Wujiyan Gongye (1999), 31(3), 23-24

CODEN: WUGOFJ; ISSN: 1006-4990

Wujiyan Gongye Bianjib

PUBLISHER: Journal

DOCUMENT TYPE: Chinese

AB Active ZnO was prepared by coordination method by making processes of extracting

and impurity removing be carried out simultaneously in production process by using extracting solution containing NH3 and NH4+ and Na2S as impurity remover. Impurities of Pb, Ca, and Cu in raw material were converted into sulfides, which were not soluble in ammonia liquor, thus were separated from Zn by filtration. Effect of Na2S amount on impurity removing effect and effect of removing impurities by Na2S on leaching rate of Zn and total yield were discussed.

L2 ANSWER 12 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:250 CAPLUS

DOCUMENT NUMBER: 130:143502

TITLE: Study on treating the acidic waste at Northwest Lead and Zinc Plant

AUTHOR(S): Wang, Xinwen

CORPORATE SOURCE: Northwest Copper and Lead Refining Plant, Baiyin, 730900, Peop. Rep. China

SOURCE: Youse Jinshu (1998), 50(4), 126-129, 132

CODEN: YSCSAE; ISSN: 1001-0211

Youse Jinshu Bianjibu

DOCUMENT TYPE: Journal

LANGUAGE: Chinese

AB A 2-stage neutralization (with slaked lime) flocculation (with S-3) process for treating acidic and smelting wastewaters showed effective heavy metal removal.

L2 ANSWER 13 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1998:704999 CAPLUS  
DOCUMENT NUMBER: 130:60293  
TITLE: Determination of zinc in environmental samples by anodic stripping voltammetry  
AUTHOR(S): Lau, Oi-Wah; Cheng, Oi-Ming  
CORPORATE SOURCE: Department of Chemistry, The Chinese University of Hong Kong, Shatin, Hong Kong  
SOURCE: Analytica Chimica Acta (1998), 376(2), 197-207  
CODEN: ACACAM; ISSN: 0003-2670  
PUBLISHER: Elsevier Science B.V.  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The copper(II) ion interference in zinc determination by anodic stripping voltammetry is removed by the addition of sulfide. The proposed method is applicable to a number of environmental samples. The calibration graph was linear from 0.3 to 11 µg of zinc. The recovery of zinc in three real samples and two synthetic sea water samples spiked with 10 trace metals using the proposed method ranged from 98% to 102%, and the precision of the method was 1.6% (n = 10) at the 1 µg level of zinc. Most of the metal ions and anions, except cobalt and nickel, found in the samples under study were found not to interfere with the determination. The method is simple, efficient and accurate, and was used for the determination of zinc in a number of natural water, domestic wastewater, air, oyster tissue, sewage sludge and sediment samples.  
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 14 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1997:793487 CAPLUS  
DOCUMENT NUMBER: 128:37658  
TITLE: Fundamental studies on the removal of copper, tin and zinc from remelted steel scrap  
AUTHOR(S): Nagasaka, T.; Hino, M.; Ban-Ya, S.  
CORPORATE SOURCE: Department of Metallurgy, Faculty of Engineering, Tohoku University, Sendai, 980-77, Japan  
SOURCE: Process Technology Conference Proceedings (1997), 15, 41-49  
CODEN: PTECEO; ISSN: 1075-8607  
PUBLISHER: Iron and Steel Society  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB Some laboratory studies have been done to discuss the possibility of copper, tin, and zinc removal from molten steel scrap. At first, the equilibrium copper distribution ratio between FeS-based sulfide flux and Fe-Csat melt at 1673K is reviewed. The copper distribution ratio, LCu, increases with the addition of alkaline or alkaline earth sulfide into FeS and reaches the maximum, while the sulfur content in metal decreases at the same time. The maximum value of LCu of approx. 20-30 is obtained in FeS-M2S (M: Li, Na, and K) and FeS-MS (M: Sr and Ba) fluxes. In the second, the vaporization rate of zinc from liquid Fe-Zn alloy is discussed at 1873K by impinging Ar onto the surface of inductively stirred melt. The evaporation rate of zinc is found to be mainly controlled by the liquid phase mass transfer under the exptl. conditions of gas velocity >5 L/min. The evaporation rate of tin from Fe-S-CSat bath is also studied at 1673K under reduced pressure. The evaporation rate of tin is controlled mainly by the gas phase mass transfer and

becomes drastically faster by adding sulfur in the metal, and it indicates that tin dissolved in liquid iron could be removed by evaporation in the form of SnS. The removal rate of tin, zinc, or other residual elements from molten steel in the conventional practical operations or vacuum treatment is also discussed based on the present results.

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 15 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1996:619880 CAPLUS  
DOCUMENT NUMBER: 125:281220  
TITLE: Arsenic distribution in copper smelter and an environmentally friendly way to remove it  
AUTHOR(S): Vircikova, Edita; Imris, Ivan  
CORPORATE SOURCE: Faculty Metallurgy, Technical University, Kosice, 040 00, Slovakia  
SOURCE: Proceedings of the Copper 95--Cobre 95 International Conference, Santiago, Nov. 26-29, 1995 (1995), Volume 2, 347-360. Editor(s): Casali, Aldo C. Canadian Institute of Mining, Metallurgy and Petroleum: Montreal, Que.  
CODEN: 63KSAV  
DOCUMENT TYPE: Conference  
LANGUAGE: English  
AB The material balance of arsenic during pyrometallurgical production of copper in the Copper Smelter Krompachy, Slovakia, suggests that arsenic is an extremely harmful element for the copper-making process and it should be removed as much as possible from the concentrate before its smelting to matte, or from the converter flue dusts where most of the arsenic accumulates during the converting process. The converter flue dust is a serious problem in terms of pollution and storage because of the high content of metal in water-soluble compds. and because of its low apparent d. The pyrometallurgical treatment of the flue dusts gives no good yields because speiss is formed and it causes some troubles in the operations. This paper describes a laboratory-scale study of a hydrometallurgical method for processing of the flue dust from a converter in the Copper Smelter Krompachy (Slovakia) with the special aim to remove the arsenic. In order to overcome the difficulties, a hydrometallurgical treatment of converter flue dusts was developed at the Faculty of Metallurgy, Tech. University, Kosice. The process consists of a selective leaching of the flue dust in which arsenic is dissolved in sodium sulfide solution and then removed by precipitation methods using various agents: zinc sulfate electrolyte, copper sulfate, mixture of phosphoric acid with calcium hydroxide, calcium oxide and ferrous or ferric sulfate. In principle, arsenic can be removed in the form of a marketable product (copper arsenic for wood preservation) or as stable precipitate compds. suitable for safe landfill disposal under existing EPA regulations.

L2 ANSWER 16 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1994:195240 CAPLUS  
DOCUMENT NUMBER: 120:195240  
TITLE: Manufacture of purified sodium sulfide from anhydrous mirabilite  
INVENTOR(S): Wang, Yongshan; Hu, Yili; Ji, Yongping  
PATENT ASSIGNEE(S): Tianshan Chemical Plant, Peop. Rep. China  
SOURCE: Faming Zhanli Shengqing Gongkai Shuomingshu, 7 pp.

CODEN: CNXXEV  
DOCUMENT TYPE: Patent  
LANGUAGE: Chinese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1075299	A	19930818	CN 1992-114398	19921206
CN 1033156	B	19961030		

PRIORITY APPLN. INFO.: CN 1992-114398 19921206  
AB The process comprises firing a mixture containing anhydrous mirabilite and coal,  
impregnating the fired mixture, adding Fe-removing agent into the solution while stirring at 50-100°, separating the solution from solid, and cooling the solution to 20-45° to obtain purified Na<sub>2</sub>S crystals. The products contain low Fe and other impurities such as Na<sub>2</sub>CO<sub>3</sub> and NaCl.

L2 ANSWER 17 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:479164 CAPLUS  
DOCUMENT NUMBER: 119:79164  
TITLE: Calculation of some optimal pH values in wastewater treatment by the use of equilibrium relations  
AUTHOR(S): Apak, Resat  
CORPORATE SOURCE: Muhendislik Fak., Istanbul Univ., Istanbul, Turk.  
SOURCE: Kim. Kim. Muhendisligi Semp., 8th (1992), Volume 4, 349-53. Editor(s): Aydin, Adnan. Marmara Univ. Fac. Sci. Lett.: Istanbul, Turk.  
CODEN: 59AOAY

DOCUMENT TYPE: Conference  
LANGUAGE: Turkish

AB Optimal empirical pH values encountered in wastewater treatment processes, e.g., precipitation, flocculation and oxidation-reduction were determined in accord with

equilibrium calcns. The problems discussed are optimal pH in coagulation processes carried out with Al and Fe(III) salts; pH of min. solubility of Al and Fe(III) phosphates in phosphate precipitation; optimal pH of Zn(II) treatment

by lime-Na precipitation; the pH of initiation of uranyl hydroxide precipitation as a

function of total uranyl concentration; Fe and Mn removal from groundwater by aeration followed by precipitation of hydrated oxides; optimal pH of total oxidation of CN- by Cl.

L2 ANSWER 18 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:171983 CAPLUS  
DOCUMENT NUMBER: 118:171983  
TITLE: Manufacture of zinc oxide by the ammonia method  
INVENTOR(S): Tang, Muotang; Lu, Junle; Yuan, Yansheng; et al.  
PATENT ASSIGNEE(S): Zhongnan Polytechnic University, Peop. Rep. China  
SOURCE: Faming Zhanli Shenqing Gongkai Shuomingshu, 7 pp.  
CODEN: CNXXEV

DOCUMENT TYPE: Patent  
LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1065685	A	19921028	CN 1992-103230	19920428
CN 1028768	B	19950607		
PRIORITY APPLN. INFO.:			CN 1992-103230	19920428
AB Zn-containing raw materials are impregnated with a solution containing N 1.5-8.5 N, NH <sub>4</sub> salt 1.5-8.5 N, (NH <sub>4</sub> ) <sub>2</sub> S <sub>2</sub> O <sub>8</sub> 0-10% of weight of raw material at a liquid/solid ratio of (2-10):1 and 0-90° for 0.5-4 h, and the impregnating solution is treated with S <sub>2-</sub> to remove other metal ions by forming metal sulfide. The purified Zn-containing solution is then treated with a complex salt, e.g., ZnSO <sub>4</sub> ·(NH <sub>4</sub> ) <sub>2</sub> SO <sub>4</sub> , to produce Zn(OH) <sub>2</sub> precipitate which is sintered at 300-900° for 0.25-6 h to produce high-purity ZnO.				

L2 ANSWER 19 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1992:109539. CAPLUS  
 DOCUMENT NUMBER: 116:109539  
 TITLE: Manufacture of zinc sulfide powder  
 INVENTOR(S): Fujita, Kenji; Ogasawara, Tadashi; Natsume, Yoshitake  
 PATENT ASSIGNEE(S): Osaka Titanium Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 03232722	A	19911016	JP 1990-27951	19900207
PRIORITY APPLN. INFO.:			JP 1990-27951	19900207
AB In preparation of ZnS powder, aqueous solns. of Na <sub>2</sub> S and ZnCl <sub>2</sub> are mixed to allow reaction. Residual S-containing Na <sub>2</sub> S may be used for reaction with ZnCl <sub>2</sub> to give ZnS suspension which is treated with NH <sub>3</sub> (g) to give ZnS powder. Preferably, the products are filtered, washed, and dried in H. The product is highly pure.				

L2 ANSWER 20 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1990:577594 CAPLUS  
 DOCUMENT NUMBER: 113:177594  
 TITLE: Sodium sulfide/ferrous sulfate metals treatment for hazardous waste minimization  
 AUTHOR(S): Carpenter, Charles; Suciu, Dan; Wikoff, Penny  
 CORPORATE SOURCE: Air Force Eng. Serv. Cent., Tyndall Air Force Base, FL, 32403, USA  
 SOURCE: Proceedings of the Industrial Waste Conference (1990), Volume Date 1989, 44th, 617-24  
 CODEN: PIWCAX; ISSN: 0073-7682  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB The Na<sub>2</sub>S/FeSO<sub>4</sub> process is described for treatment of acid wastewaters from electroplating and metal finishing, which contain Cr, Ni, Cd, Cu, Pb, and Zn. The treatment involves neutralization of effluents with reduction of Cr(VI) and precipitation of the metals with sludge volume smaller than that obtained

by conventional neutralization/precipitation. The Cr(VI) content in the effluent

is reduced to <0.1 mg/L at pH 7.2-7.5. The design and development of pilot- and full-scale installations, selection of operation parameters, and economic and environmental issues are described and discussed.

L2 ANSWER 21 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1988:226315 CAPLUS  
DOCUMENT NUMBER: 108:226315  
TITLE: An air stripping method for treatment of electroplating solutions  
AUTHOR(S): Pearson, Donald E.; Bowers, Alan R.  
CORPORATE SOURCE: Viking Industries, Inc., Murfreesboro, TN, 37133, USA  
SOURCE: Hazardous Waste & Hazardous Materials (1988), 5(1), 85-91  
CODEN: HWHME2; ISSN: 0882-5696  
DOCUMENT TYPE: Journal  
LANGUAGE: English  
AB The hypochlorite method of CN<sup>-</sup> removal from electroplating wastewaters (both real and simulated) is compared with that of air stripping for CN<sup>-</sup> removal and recovery as NaCN. The CN<sup>-</sup>, as HCN, is purged with air at apprx.80° and then absorbed in a 1.5% NaOH solution. Although NaCN is not a precious commodity, the process can be cost-effective for concentrated electroplating baths. Removal of CN<sup>-</sup> was generally better by air stripping than by standard hypochlorite destruction. Addnl., 97.3-100% of the CN<sup>-</sup> was recovered by a NaOH bath, and the removal of Ce, Cu, Fe, Na, and Zn by S<sup>2-</sup> precipitation was equivalent to or better than the removal following hypochlorite destruction.

L2 ANSWER 22 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1987:180609 CAPLUS  
DOCUMENT NUMBER: 106:180609  
TITLE: Manufacture of low-copper steel from pig iron containing copper  
INVENTOR(S): Tokuda, Masanori; Ito, Kimihisa; Obara, Yasushi; Kawahara, Norizo  
PATENT ASSIGNEE(S): Iwate Steel Co., Ltd., Japan  
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
CODEN: JKXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 61266515	A	19861126	JP 1985-106915	19850521
JP 1985-106915 19850521				

PRIORITY APPLN. INFO.: AB Low-Cu steel is manufactured from molten pig iron containing Cu, C, and metal impurities by adding Na<sub>2</sub>S and Na<sub>2</sub>SO<sub>4</sub> to transfer the Cu and impurities into slag. The vaporizing of Na is suppressed during the addition, but vaporized Na is recovered along with the Na<sub>2</sub>S and Na<sub>2</sub>SO<sub>4</sub> in slag for reuse. A crucible was filled with 500 kg pig iron containing C 2.53, Si 0.80, Mn 0.53, P 0.115, S 0.135, Cu 1.43, Ti 0.105, Cr 0.062, V 0.040, and Zn 0.025% at 1400-1500°, 150 kg of a Na<sub>2</sub>S-Na<sub>2</sub>SO<sub>4</sub> mixture (1:2) was added, and then slagged 3-5 min later. The adding-slagging process repeated 7 times and powdered CaC<sub>2</sub> was then injected for desulfurization.

Molten steel containing C 0.32, Cu 0.03, and Si, Mn, P, Ti, Cr, V, and Zr <0.01% each was manufactured. Vaporized Na<sub>2</sub>S (.apprx.15%) was recovered by scrubbing while in-slag Na<sub>2</sub>S and Na<sub>2</sub>SO<sub>4</sub> were recovered by an eluting-precipitating process.

L2 ANSWER 23 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1982:514848 CAPLUS

DOCUMENT NUMBER: 97:114848

TITLE: Treatment of mine wastewater

PATENT ASSIGNEE(S): Toho Zinc Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 57081880	A	19820522	JP 1980-157984	19801110
PRIORITY APPLN. INFO.:			JP 1980-157984	19801110
AB	Mine drainage containing Fe, Zn, or other heavy metal ions is treated with a carbonized sawdust to remove Fe ion; then the effluent is treated with a sulfidizing agent and filtered through the carbonized sawdust to remove Zn ion. Thus, mine drainage containing 14.22 ppm Zn <sup>2+</sup> and 0.042 ppm Cd <sup>2+</sup> was passed through 6 carbonized sawdust columns in series, and a Na <sub>2</sub> S solution was fed to the 2 column. The removal was 100% for Cd and 97% for Zn.			

L2 ANSWER 24 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1981:553011 CAPLUS

DOCUMENT NUMBER: 95:153011

TITLE: Zinc removal from aluminate solutions

INVENTOR(S): Bird, Robert D.; Vance, Harry R.

PATENT ASSIGNEE(S): Reynolds Metals Co., USA

SOURCE: U.S., 6 pp.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4282191	A	19810804	US 1980-172420	19800725
PRIORITY APPLN. INFO.:			US 1980-172420	A 19800725
AB	The amount of Zn impurity in a caustic Na aluminate solution for preparing Al2O3 is decreased by adding ZnS seed crystals in the presence of S <sup>2-</sup> . The ZnS seed crystals are prepared by treating a caustic Na <sub>2</sub> ZnO <sub>2</sub> solution with a sufficient amount of Na <sub>2</sub> S to form ZnS and have an excess of Na <sub>2</sub> S in an amount sufficient to give ≥0.150 g Na <sub>2</sub> S/L when the solution is added to the process liquor. The preceding solution is added to the Zn-containing process liquor to precipitate ZnS and give a solution after filtration containing <10 mg ZnO/L.			

L2 ANSWER 25 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1978:448469 CAPLUS  
 DOCUMENT NUMBER: 89:48469  
 TITLE: Heavy metal removal from wastewaters  
 INVENTOR(S): Hirose, Kiyoshi; Fukatsu, Ryoki; Fujita, Takeshi  
 PATENT ASSIGNEE(S): Sakai Chemical Industry Co., Ltd., Sakai, Japan; S. K. Engineering K. K.  
 SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 52126058	A	19771022	JP 1975-48044	19750418
PRIORITY APPLN. INFO.:			JP 1975-48044	A 19750418
AB Wastewaters are treated alkaline, then the heavy metals are precipitated as sulfides, and the excess S <sub>2-</sub> in the wastewaters is precipitated. Thus, a wastewater containing 100 ppm each of Fe <sup>2+</sup> , Pb <sup>2+</sup> , and Zn <sup>2+</sup> was heated at 70°, then NaOH (to pH 9) and 1% Na <sub>2</sub> S (1.5 equiv of the metals) was added to contain 0.9, 0.5, and <0.1 ppm, resp. in the supernatant. ZnCl <sub>2</sub> (0.8 equivalent) was added to remove excess S <sub>2-</sub> .				

L2 ANSWER 26 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1977:18485 CAPLUS  
 DOCUMENT NUMBER: 86:18485  
 TITLE: Cadmium pigments with low acid-soluble cadmium content  
 INVENTOR(S): Berger, Rolf; Kuch, Wolfgang; Endriss, Hartmut  
 PATENT ASSIGNEE(S): BASF Farben und Fasern A.-G., Fed. Rep. Ger.  
 SOURCE: Belg., 9 pp.  
 CODEN: BEXXAL  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
BE 834804	A1	19760216	BE 1975-161191	19751023
DE 2513964	A1	19760930	DE 1975-2513964	19750329
FR 2293477	A1	19760702	FR 1975-32292	19751022
JP 51068630	A	19760614	JP 1975-126951	19751023
NL 7513013	A	19760609	NL 1975-13013	19751106
US 3977895	A	19760831	US 1975-635720	19751126
BR 7508012	A	19760824	BR 1975-8012	19751203
PRIORITY APPLN. INFO.:			DE 1974-2457390	A 19741205
			DE 1975-2513964	A 19750329
AB The content of acid-soluble Cd salts in red and yellow pigments was reduced by pretreating the pigments with SnCl <sub>4</sub> , then either adding Na <sub>2</sub> S to precipitate the Sn, and washing the pigment free of Cl, or neutralizing the pretreated mixture with NaOH, and adding ZnSO <sub>4</sub> in HOAc, followed by aqueous Na <sub>2</sub> S. Typically, Cd red pigment in water was treated with aqueous SnCl <sub>4</sub> , followed by aqueous Na <sub>2</sub> S, washed, filtered, dried, and milled to give a pigment containing 0.0008% acid-soluble Cd salts rather than the 0.06% content of untreated				

pigment.

L2 ANSWER 27 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1976:109050 CAPLUS  
DOCUMENT NUMBER: 84:109050  
TITLE: Removal of cobalt from zinc solutions  
INVENTOR(S): Neverov, L. P.; Chernova, R. A.  
PATENT ASSIGNEE(S): Ust-Kamenogorsk Lead-Zinc Combine, USSR  
SOURCE: U.S.S.R. From: Otkrytiya, Izobret., Prom. Obraztsy, Tovarnye Znaki 1975, 52(40), 67.  
CODEN: URXXAF  
DOCUMENT TYPE: Patent  
LANGUAGE: Russian  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
SU 489798	A1	19751030	SU 1974-2040533	19740705
PRIORITY APPLN. INFO.:			SU 1974-2040533	A 19740705
AB Alkali metal xanthate was used as the precipitating reagent for the purification of Zn solns. To decrease the consumption of the reagent and to facilitate the filtration of purified solns., alkali metal xanthate was mixed with alkali metal sulfide (Na <sub>2</sub> S) 1 weight part per 0.5-20 weight parts of xanthate.				

L2 ANSWER 28 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN  
ACCESSION NUMBER: 1969:515415 CAPLUS  
DOCUMENT NUMBER: 71:115415  
ORIGINAL REFERENCE NO.: 71:21509a,21512a  
TITLE: Purifying Bayer digester slurry  
INVENTOR(S): Hrishikesan, Kizhakke G.; Kane, James F.; Teas, Edward B.; Brown, William Haddon  
PATENT ASSIGNEE(S): Reynolds Metals Co.  
SOURCE: U.S., 3 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3469935	A	19690930	US 1965-456817	19650518
PRIORITY APPLN. INFO.:			US 1965-456817	A 19650518
AB To meet the purity specifications for metallic Al which limit the Zn content to $\leq 0.03\%$ , the Bayer-process liquor should contain $\leq 0.012$ g. ZnO/kg. In using Caribbean bauxite ores which are relatively high in Zn, the Bayer liquor may contain as much as 0.024 g. ZnO/kg. In the present process, an alkali metal sulfide is added to the digester slurry to precipitate ZnS, and the mixture is held in a quiescent state for 15-45 min. The resulting clarified liquor can be purified further by filtering through a bed of red mud. Thus, to digester slurry containing 93 g. Al <sub>2</sub> O <sub>3</sub> /kg. and 0.024 g. ZnO/kg. was added 0.18 g. Na <sub>2</sub> S/kg. The mixture was held quiescent at 200°F. for 30 min. The supernatant liquor contained 0.01 g. ZnO/kg. Filtration through red mud further decreased				

the ZnO to 0.006 g./kg. The Na<sub>2</sub>S for this process can be prepared by carbothermic reduction of a mixture of Na<sub>2</sub>SO<sub>4</sub>, Na<sub>2</sub>CO<sub>3</sub>, and NaAlO<sub>2</sub> obtained as a by-product in the Bayer process.

L2 ANSWER 29 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1969:504154 CAPLUS  
DOCUMENT NUMBER: 71:104154  
ORIGINAL REFERENCE NO.: 71:19439a,19442a  
TITLE: Removal of zinc from Bayer process liquors with sodium sulfide  
AUTHOR(S): Hansen, Robert Marius  
CORPORATE SOURCE: Kaiser Alum. and Chem. Corp., Gramercy, LA, USA  
SOURCE: Journal of Metals (1969), 21(9), 32-4  
CODEN: JOMTAA; ISSN: 0148-6608  
DOCUMENT TYPE: Journal  
LANGUAGE: English

AB Some of the Zn present in Jamaican bauxite dissolves in the Bayer process and contaminates the finished Al<sub>2</sub>O<sub>3</sub>. To correct this, NaHS (a by-product of petroleum refining) is added to the hot Na aluminate liquor after sedimentation, but prior to clear-pressing. The Zn is precipitated as ZnS and removed at the clear press. The S is oxidized to Na<sub>2</sub>SO<sub>4</sub> and accumulates in the liquor. However, the SO<sub>4</sub> - enters the desilication product on subsequent cycles, so that the liquors need not be purged of Na<sub>2</sub>SO<sub>4</sub>. There is some insol. Zn in the ore, and some Na<sub>2</sub>S is recycled; hence an anal. control method was developed, based on the principle of atomic absorption. Graphs show the solubility of Zn vs. Na<sub>2</sub>S at various initial Zn levels, the solubility of Zn vs. contact time at various Na<sub>2</sub>S levels, and Na<sub>2</sub>SO<sub>4</sub> substitution in desilication product vs. Na<sub>2</sub>SO<sub>4</sub> concentration

L2 ANSWER 30 OF 30 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1969:432594 CAPLUS  
DOCUMENT NUMBER: 71:32594  
ORIGINAL REFERENCE NO.: 71:6039a  
TITLE: Purifying aluminate solutions  
INVENTOR(S): Hrishikesan, Kizhakke G.  
PATENT ASSIGNEE(S): Reynolds Metals Co.  
SOURCE: U.S., 3 pp.  
CODEN: USXXAM  
DOCUMENT TYPE: Patent  
LANGUAGE: English  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3445186	A	19690520	US 1966-600377	19661209
PRIORITY APPLN. INFO.:			US 1966-600377	A 19661209

AB Dissolved Zn is removed from Bayer-process liquor by adding Na<sub>2</sub>S, whereby Zn is precipitated as ZnS. Thus, Bayer digestion slurry from the treatment of Haiti bauxite (Al<sub>2</sub>O<sub>3</sub> 45.86, Fe<sub>2</sub>O<sub>3</sub> 20.96, and ZnO 0.031%) contained Al<sub>2</sub>O<sub>3</sub> 93 and ZnO 0.024 g./kg. To this slurry at 200°F. was added 0.18 g. Na<sub>2</sub>S/kg., the mixture was held 60 min., starch was added to aid sedimentation, and the solids were allowed to settle. The clarified liquor contained 0.01 g. ZnO/kg.

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	ENTRY	SESSION
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